Review of 1996 British Columbia Salmon Troll Fisheries

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2001

Canadian Manuscript Report of Fisheries and Aquatic Sciences 2587

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102-03041/

Canadian Manuscript Report of

Fisheries and Aquatic Sciences 2587

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by

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Cat. No. Fs 97A/2587E ISSN 0706-6473

Correct citation for this publication:

Shaw, W., R. P. Preston and L. Kearey. 2001. Review of 1996 British Columbia salmon troll fisheries. Can. Manuscr. Rep. Fish. Aquat. Sci. 2587: vii + 122 p.

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ABSTRACT

Shaw, W., R. P. Preston and L. Kearey. 2001. Review of 1996 British Columbia salmon troll fisheries. Can. Manuscr. Rep. Fish. Aquat. Sci. 2587: vii + 122 p.

This report documents the management actions, catch, effort, troll monitoring program and media releases relating to the British Columbia troll salmon fisheries in 1996. In-season management actions were designed to maintain catches of each salmon species within conservation and escapement guidelines while allowing each fishery to remain open for as much of the season as possible. Troll fisheries in the Strait of Georgia, on the West Coast of Vancouver Island, in Johnstone Strait and on the North Coast were managed with combinations of partial and total area closures and periods of non-retention and non-possession for certain salmon species and fisheries.

In the 1996 troll fishery, unprecedented management actions were taken to conserve West Coast Vancouver Island chinook stocks. A troll monitoring program was designed and initiated to assess and evaluate chinook encounter rates in the troll fishery. An integrated management plan was developed and instituted to address serious conservation concerns for West Coast Vancouver Island and Lower Strait of Georgia chinook stocks encountered in all B.C. coastal fisheries.

The 1996 salmon troll season was considered anomalous, and therefore allocation guidelines were not established at the outset of the troll season. There was no Canada - U.S. Treaty agreement in place at the beginning of the fishing season. Lower Strait of Georgia and West Coast Vancouver Island chinook conservation concerns and the anticipated poor returns of Fraser River sockeye populations contributed to a forecast of relatively low catches in most B.C. coastal salmon troll fisheries.

Area licensing was instituted in B.C. coastal fisheries in 1996. Licence stacking options were made available to fishers who wished to participate in more than one area fishery. A license retirement program was also initiated to reduce the commercial fishing fleet by 50 %.

Catch highlights from the 1996 troll fishery included the effective elimination of chinook capture coast-wide, the reduction of the Strait of Georgia coho catch by non-retention, non-possession restrictions and the optimization of the North coast and West coast Vancouver Island coho catch and the North coast catch of non-Fraser River pink salmon.

Key words: Pacific salmon, troll fishery, integrated management plan, troll monitoring program, chinook conservation

RÉSUMÉ

Shaw, W., R. P. Preston and L. Kearey. 2001. Review of 1996 British Columbia salmon troll fisheries. Can. Manuscr. Rep. Fish. Aquat. Sci. 2587: vii + 122 p.

Sont documentés dans le présent rapport les mesures de gestion, les prises, l'effort de pêche, le programme de surveillance de la pêche aux lignes traînantes et les communiqués de presse en relation avec les pêches du saumon aux lignes traînantes effectuées en Colombie-Britannique en 1996. Les mesures de gestion prises pendant la saison de pêche visaient à maintenir les prises de chaque espèce dans les limites des lignes directrices en matière de conservation et d'échappée tout en assurant l'ouverture de chaque pêche aussi longtemps que possible. Une combinaison de fermetures partielles et totales des pêcheries et de périodes de graciation et d'interdiction de possession applicables à certaines espèces et pêcheries a été utilisée pour gérer les pêches aux lignes traînantes dans le détroit de Georgia, sur la côte ouest de l'île de Vancouver, dans le détroit de Johnstone et sur la côte nord de la province.

Des mesures de gestion extraordinaires visant la pêche aux lignes traînantes ont été prises en 1996 afin de conserver les stocks de saumon quinnat de la côte ouest de l'île de Vancouver. Un programme de surveillance de la pêche aux lignes traînantes a été conçu et mis en œuvre pour déterminer et évaluer le taux de rencontre du saumon quinnat. Un plan de gestion intégrée a aussi été élaboré et mis en oeuvre pour répondre aux graves préoccupations que soulevait la conservation des stocks de saumon quinnat de la côte ouest de l'île de Vancouver et de l'entrée du détroit de Georgia rencontrés dans toutes les pêcheries côtières de la Colombie-Britannique.

La saison de pêche du saumon aux lignes traînantes de 1996 ayant été considérée comme anormale, les lignes directrices en matière d'allocations n'ont pas été établies au début de la saison de pêche. Aucune entente en vertu du Traité du saumon du Pacifique n'avait été conclue entre le Canada et les États-Unis au début de la saison de pêche. Les préoccupations à l'endroit de la conservation du quinnat de l'entrée du détroit de Georgia et de la côte ouest de l'île de Vancouver, ajoutées aux prévisions de remontes peu abondantes du saumon rouge du Fraser, étaient à l'origine de la prévision à l'effet que les prises de saumon aux lignes traînantes dans la plupart des pêcheries côtières de la Colombie-Britannique seraient relativement faibles.

La délivrance de permis par zone de pêche côtière de la Colombie-Britannique a commencé en 1996. Des options de cumul de permis ont été offertes aux pêcheurs qui désiraient participer à plus d'une pêche par zone. Un programme de retrait de permis a aussi été mis en œuvre en vue de réduire de moitié la taille de la flottille de pêche commerciale.

Les prises nulles de saumon quinnat à l'échelle de la côte, la réduction des prises de saumon coho dans le détroit de Georgia grâce aux restrictions relatives à la graciation et à l'interdiction de possession, ainsi que l'optimisation des prises de saumon coho sur la côte nord de la province et la côte ouest de l'île de Vancouver et des prises, sur la côte nord de saumon rose autre que du Fraser, comptent parmi les faits saillants de la pêche aux lignes traînantes en 1996.

Mots-clés : saumon du Pacifique, pêche aux lignes traînantes, plan de gestion intégrée, programme de surveillance de la pêche aux lignes traînantes, conservation du saumon quinnat

1. INTRODUCTION

The Department of Fisheries and Oceans (DFO) actively managed troll fisheries off British Columbia in 1996, as they have been since the early 1980s. This report is one of a series reporting on B.C. troll fisheries (Milne 1964; Argue et al. 1983, 1987; Shardlow *et al.* 1986, 1988, 1991; Ryall and Shardlow, 1991, 1992; Ryall, 1993; Gillespie and Shardlow, 1995)

There was no Pacific Salmon Treaty ceiling for chinook in 1996, however Canada's principle management objective was to address severe conservation concerns for returning West Coast Vancouver Island (WCVI) chinook stocks. The objective for the troll fishery was to manage for a complete closure for chinook (non-retention/non-possession). Active in-season management was primarily directed towards optimising harvestable surpluses while achieving conservation objectives. Management recommendations for the fisheries for sockeye (*Oncorhynchus nerka*), pink (*O. gorbuscha*) and chum salmon (*O. keta*) for the 1996 fishing season were co-operatively produced by DFO, the Pacific Salmon Commission (PSC) and the Commercial Fishing Industry Council (CFIC) prior to the commencement of the fishing season. The recommendations of the CFIC were based on recognition of cycle year expectations for sockeye, pink and chum. Fraser River sockeye, chum and pink, and Mainland Inlet pink return expectations were estimated to be below escapement requirements at the outset of the season, therefore the CFIC recommended that DFO determine fishing opportunities in-season to provide maximum fishing opportunities on available surpluses and equitable allocation among all commercial gear sectors (seine, gillnet and troll). In the North Coast area access to Fraser River sockeye was limited to assessment purposes only.

Advisory committees consisting of fishermen, industry representatives and DFO personnel developed recommendations for fishing plans prior to the 1996 fishing season (Appendices 1-3). This report documents the 1996 troll fishing plans for west coast British Columbia, the Troll Monitoring Program, in-season management actions, catches in pieces and fishing effort for four troll fisheries: Strait of Georgia (Statistical Areas 13 to 18 and 29 (Fig. 1)), West Coast Vancouver Island (Areas 21 to 27, 121 to 127 and 130-1(Fig. 1)), Johnstone Strait (Areas 111, 11, 12 and 13 (Fig. 1)) and Central and North Coast (Areas 1 - 11, 101 - 111, 130-2 and -3 and 142 (Fig. 2)).

1.1 CHINOOK AND COHO CONSERVATION MEASURES FOR 1996

In 1996, Fisheries and Oceans Canada took unprecedented management actions to conserve the wild chinook populations along the West Coast of Vancouver Island. The evidence for the severity of the conservation concern was so strong that the responsible management action, for the long term sustainability of these chinook populations, called for strict protection of the spawners surviving in 1996.

Low returns of these stocks for 1996 were thought to be due to several factors related to unparalleled warm ocean conditions from 1991 to 1995 and associated predation by mackerel on juvenile WCVI chinook. During preseason meetings with the commercial industry, First Nations, recreational sector and West Coast communities, DFO presented a review of the chinook problem, results of current work and the management response to address conservation measures (Fig. 3).

An Integrated Fisheries Management Plan (IFMP) for West Coast Vancouver Island chinook provided coast-wide management strategies which included area closures, partial area closures and non-retention, non-possession of chinook in all coastal troll fisheries. Voluntary use of barbless hooks was promoted by all B.C. Troll Associations for areas of high chinook encounter rates.

A coastwide Troll Monitoring Program was initiated for the 1996 directed coho fishery (see Section 2.0). This program enabled managers to obtain daily estimates of chinook encounters during a troll fishery. The encounter rate information helped to guide managers in their decision for opening and closing specific conservation zones in order to reduce impacts on chinook stocks while optimizing coho troll opportunities. The monitoring program was also used by managers for the North Coast (NC) salmon troll fishery.

Lower Georgia Strait chinook and coho stocks, for which there were serious conservation concerns in 1995, were similarly depressed in 1996. As a result there were non-retention, non-possession requirements for chinook and coho in the Strait of Georgia salmon troll fishery.

1.2 SPECIES ALLOCATION GOALS

Commercial salmon fishing plans in 1996 reflected the Departmental goals of meeting escapement targets while allowing available harvestable surpluses in a manner that ensured international and domestic allocations were achieved. However, many sockeye, coho, pink and chum run size predictions at the outset of the troll season were considered too low to provide harvestable surpluses. The numbers of fish allocated to troll fisheries were adjusted during the season as run size estimates were updated. For some stocks where there were expectations for harvestable surpluses, no pre-season allocation goals or catch ceilings were established. These fisheries were managed using in-season catch information.

1.3 SOURCE OF CATCH DATA

Catch data presented in this report were obtained as post-season information from the Catch Database Spreadsheet System (CDSS). This information includes sales slip records (Wong 1983), Mark / Recapture Program (MRP) records and salmon stock assessment records. Updated information for this report was obtained February 6, 1998.

During the troll fishing season, information on catch and effort was collected through contractor services, Jim Thomas & Associates (JOT); a program of on-water hails coupled with aerial overflights; and a logbook program where daily catch and effort information was phoned in to a contractor on a daily basis. All sources of information were used to make management decisions during the season. Catch data were provided each week during the fishery, and were continually updated throughout the season.

2. TROLL MONITORING PROGRAM

For the 1996 troll season off British Columbia, DFO initiated a new program to monitor and evaluate the number of chinook encountered in a coho directed fishery. This monitoring program was required to fulfil the commitments announced by the Minister:

> *"I am committed to ensuring that incidental mortality in the coho troll fishery is absolutely minimized. Area and time closures will be imposed and strictly enforced. Extensive monitoring and evaluation of troll fisheries will be conducted to determine the extent to which chinook are being encountered in the fisheries for other salmon species. In the event that encounter rates are high, additional area and time restrictions, including complete closure of the fishery, will be invoked as warranted..."* (press release NR-PR-96-24E; May 24, 1996).

To monitor encounter rates of chinook during a coho directed troll fishery, DFO implemented a troll monitoring program. This program ensured that the Regional conservation objectives were being met and that in-season management changes could be made as required. The co-operation and support of fishers in this program was an important factor for increasing it's effectiveness and thus maximize fishing opportunities. The chinook encounter rate monitoring program included trollers from a number of industry organizations including the Northern and Pacific Trollers Associations (NTA and PTA) participating in a voluntary daily phone-in Logbook Program. A second component to the program involved test boats with on-board observers. A third component involved charter patrol boats (2 off WCVI and 2 in North Coast), patrol vessels, and port samplers from JOT provided hail and sales slip catch data.

2.1 LOGBOOK PROGRAM

The Logbook Program off WCVI was developed jointly between DFO and the PTA with the latter committing 18 trollers to participate. A contractual arrangement was developed where participants phoned in their daily catch to an independent contractor set-up by the PTA and DFO. Data transmitted included catch by time, area, and hours fished. Logbook fishermen recorded chinook lengths as legal (>= 67 cm) and sublegal based on visual observations. The intent was to minimize stress and associated mortalities due to release.

Off WCVI the traditional troll Conservation Areas is presented in Fig. 4. However, because of the high conservation concerns for WCVI chinook in 1996 trollers were restricted by extensive closures of chinook sensitive areas along the 40 to 60 fathom depth contour. In order to delineate areas off high chinook encounters a new area map of the WCVI was developed, which included all of the traditional troll Conservations Areas in Fig. 4. , such as Conservation Areas A-E, F1, G-L, and S off Barkley Sound except for Conservation Area F2. The new area map was segregated into 35 "fishing zones" (see Section 2.1) and are presented by closure dates (Figs. 5-12). These zones were included as a map in the logbook. The logbooks included a set of instructions and a series of logsheets to record catch over 3 distinct fishing periods per day (Figs.13-14). The daily phone in data was received by the contractor who entered the data into a relational database. Each day the relational database was electronically mailed to DFO in

Vancouver and Nanaimo. Managers analyzed the data to estimate both chinook and coho encounters on a daily basis.

Fishing opportunities for the North Coast trollers were similarly limited by large area closures including the west coast of the Queen Charlotte Islands and areas known for high chinook abundance from Masset to Langara Island (Chinook Redline Boundary Area) (refer to Appendix Table 3, figs. 1-8 for area maps). Logbooks were distributed to 10 trollers on the North Coast by DFO in Prince Rupert. This was a volunteer program and only three vessels in North Coast phoned into the contractor on a daily basis.

2.2 TEST BOAT PROGRAM

Starting on July 3, five days before the season opened, DFO deployed 8 trollers as test boats to monitor the total catch in both open and closed areas off the WCVI. This early start provided an indication of what the "fleet" would encounter at the start of the season. The test boats operated in pairs and were distributed along the entire coast to ensure broad coverage of the fishery. The test boats phoned their data into DFO, Nanaimo on a daily basis. When the season opened the test boats continued their daily phone in of catch data. DFO merged the test boat database with the logbook database in order to use both data sets for in-season management of the fishery.

No Test-Boat Program was conducted on the North Coast. Catch data were recorded from daily hails and vessel boardings conducted by DFO Conservation and Protection staff.

2.3 OBSERVERS

Three DFO-certified at-sea observers were contracted from August 12 to September 22 to work on three test boats. Observer coverage was restricted to off WCVI, primarily off lower WCVI. The observers were tasked to ensure quality control of data recording, assist in data recording, document gear methodology and collect coded wire tag (CWT) data from coho. Chinook salmon were not sampled for conservation reasons.

2.4 HAIL PROGRAM

Off WCVI and the North Coast two charter patrol vessels each worked amongst the troll fleet. Charter patrolmen either boarded or hailed vessels to collect catch estimates and hours fished, in a similar format to the Logbook Program. This information was phoned into DFO (Nanaimo or Prince Rupert offices) on a regular basis.

2.5 EFFORT

Effort information was collected via two sources:

a. Logbook/Monitor Program provided data on hours fished for three time periods (04:00h-10:00h, 10:00h-16:00h, 16:00h-22:00h) on a daily basis (Fig. 14).

b. Effort counts (number of vessels fishing) were collected by three methods: via radar from the Coast Guard facility in Ucluelet with a hard copy being submitted to DFO on a daily basis by JOT (only for WCVI); overflights conducted by the contracted airline, Provincial Airlines (PAL) every second or third day; and, by visual counts by patrol and charter patrol vessels.

The total daily effort count was reconciled for the three methods. The counts provided by PAL were considered relatively accurate, as confirmed by DFO participation, and therefore were the preferred data. On days where no overflight data was available the radar counts (modified to exclude vessels other than trollers) were used, as they were comparable to the PAL data. The radar data were cross-referenced with the charter patrol vessel and enforcement vessel data. Since the radar data were limited to the lower WCVI, counts of vessels on the WCVI north of the radar range were not available. In this case, vessel counts from charter patrol and enforcement vessels were used (i.e. North Coast). If these data were not available then the previous day's counts were used. Once the total effort was determined for each fishery, by zone, then it was incorporated in the PTA/test boat relational database for determining overall catch.

2.6 DATA ANALYSES

The expanded catch for each fishing zone for each day was estimated from the daily reports by PTA and test boats using the following formula:

$$Expanded\ Catch = catch/hour * hours/boat * fleet\ size,$$

where *catch* is the daily reported encounters of chinook and catch of other species per zone, *hour* is the total hours fished that day per zone, *hours* is the total fishing hours summed across all boats reporting per day, *boat* is the total number of boats reporting per day, and *fleet size* is the total daily effort count reconciled from the three methods (overflight, radar, and charter patrol/enforcement counts).

As the North Coast was managed differently from the WCVI, data received were arranged into six areas (Cape Chacon, Dundas Is., Area 101, A-B Line, Hecate Strait, and Central Coast Area) and hail and enforcement officer estimates were used to project total daily catch by species. Logbook information was not used to calculate catch for the northern fishery. The expanded catch, in each area, was estimated using the following formula:

$$Expanded\ Catch = catch/boat * fleet\ size,$$

where *catch* is the daily reported encounters of chinook and catch of other species per area from hail and enforcement officer estimates, *boat* is the number of boats that were hailed for catch per day, and *fleet size* is the total daily effort count reconciled from overflight and charter patrol/enforcement counts. The hours fished each day per boat was not recorded in the north.

2.7 PERCENT WCVI CONTRIBUTION

In order to account for the run timing of WCVI chinook as they move down the west coast, the expanded catch results were divided into Northwest troll (Statistical Areas 125-127) (NWTR), Southwest troll (Statistical Areas 121, 123-124) (SWTR) and northern troll (Statistical Areas 1-5) (NTR). The 1996 WCVI chinook contribution to the weekly troll catch was based on expanded 1994 CWT recoveries. The North Coast contribution was based on 1995 CWT recoveries over the duration of the fishery. We assumed these values applicable to the 1996 fisheries even though the abundance of WCVI chinook was less in 1996 than in 1994. Also, we assumed that all the WCVI chinook were in the terminal areas by statistical week 9/4.

The percent contribution of WCVI chinook used in the analyses by area are presented for the duration of the fishery by statistical week in the following table:

	West Coast Vancouver Island		North Coast
Statweek	SWTR (%)	NWTR (%)	NTR (%)
7/1	0.71	3.80	4.0
7/2	0.71	3.80	4.0
7/3	0.64	6.57	4.0
7/4	1.05	4.40	4.0
7/5	1.00	1.72	4.0
8/1	0.68	3.32	4.0
8/2	1.67	2.60	4.0
8/3	3.05	2.64	4.0
8/4	4.27	2.02	4.0
9/1	4.27	3.26	4.0
9/2	6.29	1.80	4.0
9/3	2.10	1.28	4.0
9/4	0	0	0

2.8 SHAKER MORTALITY

During the directed troll fishery for coho all chinook caught were supposed to be immediately released. Some of these fish will die as a result of stress from catch and release and from hooking injuries. Hooking studies by Stohr and Fraidenburg (1986) have shown that mortality of troll caught and released chinook range from 25 to 30%. To estimate the chinook shaker mortality for the 1996 troll season we used 25%.

2.9 PERCENT WCVI CHINOOK MORTALITY

The number of WCVI chinook killed during the troll fishery was estimated as:

*WCVI Chinook Mortalities = Expanded Catch * %WCVI * Shaker Mortality*

3. STRAIT OF GEORGIA TROLL

3.1 BACKGROUND AND DEVELOPMENT OF FISHING PLANS

The 1996 Strait of Georgia troll (Licence Area H) fishing plans (Appendix 1) were developed by DFO using pre-season expectations. Specific details of individual fisheries were developed in consultation with Area H fishers and processors. No Pacific Salmon Treaty fishing agreement was in place at the outset of the 1996 season. There was no specific allocation plan in 1996. Run size expectations were so poor at the outset of the season that CFIC recommended that DFO manage to the 1996 commercial troll salmon fishery using the following prioritized allocation criteria:

1. Maximize the commercial harvest of the available surplus by each commercial gear type.
2. Do not use the 1992 allocation plan for 1996.
3. Be as fair and equitable as possible in allocating the available resources between the three gear sectors within the constraints of points 1 and 2 above.
4. The 1996 season should be considered anomalous and, therefore, the 1996 catches should not set any precedents for the Long Term Allocation Plan.

The 1996 Strait of Georgia salmon troll season was scheduled to commence August 7 with in-season allocations based on updated run sizes. Table 1 summarizes management provisions and troll catch.

3.1.1 Chinook

There was no chinook fishery in the Strait of Georgia during 1996 due to continued conservation concerns. Non-retention and non-possession restrictions for chinook were in place for the entire 1996 Strait of Georgia salmon troll fishery.

3.1.2 Coho

There was non-retention and non-possession for coho during all Strait of Georgia fisheries in 1996 due to serious conservation concerns.

3.1.3 Chum

The study area (Johnstone Strait, Strait of Georgia and Fraser River) chum total run size was forecast to be 4.2 million prior to the commencement of the fishing season. Ocean survival conditions were poor for this brood year and this forecast was expected to be optimistic. The CFIC recommended that DFO allocate the fish in the most fair and equitable manner possible. Fishing opportunities for Area H licence holders were therefore considered, depending on run sizes.

3.1.4 Sockeye

The pre-season risk-averse run size forecast for Fraser River sockeye was 1.56 million, with no Canadian commercial catch expected. Canada and the United States reached a catch-sharing agreement on July 19, 1996 (Pacific Salmon Commission, 1996). The United States agreed to deduct 400,000 sockeye from the gross TAC for Canadian aboriginal fisheries. At the official pre-season risk-averse forecast level, the Canadian and United States (Washington) shares of the remaining TAC were zero and 50,000 fish, respectively.

If run sizes exceeded the forecast sufficiently to create a TAC for commercial harvest sharing, the United States catch share in Panel Areas would be 16.1% of the TAC below 2,000,000 fish, and smaller percentage shares at larger TACs up to a cap of 800,000 sockeye. Early Stuart and early summer-run stocks would not be subject to directed fisheries in Washington. In-season allocations for Canadian fisheries would be determined by DFO. In order to address unexpected surpluses, a meeting was planned with Area H fishers for July to draft a contingency plan to harvest any surplus stocks. The results of this meeting were announced in a Notice to Industry. Canada provided a gross escapement goal of 1,612,000 on August 2. A negotiated risk-averse buffer of 314,000 fish resulted in an adjusted gross target of 1,926,000 fish.

3.1.5 Pink

The total expected return for study area (Johnstone Strait and Strait of Georgia) pink salmon was forecast at 1.79 million. The escapement requirement had been established at 3.1 million. The 1996 season was an off-cycle year for southern bound (e.g. Fraser River) pink salmon. Mainland Inlets (Statistical Area 12) pinks were also expected to be low in abundance in 1996. While no surplus of these stocks was expected, a small surplus to the Kakweiken River system of approximately 250,000 was anticipated.

In the event of increased run size forecasts, in-season allocations for pink salmon troll fisheries would be determined by DFO. In order to address unexpected surplus, a meeting was planned with Area H fishers for July to draft a contingency plan to harvest any surplus stocks. The results of this meeting were announced in a Notice to Industry.

3.2 CATCH AND IN-SEASON ACTIONS FOR STRAIT OF GEORGIA

The troll season in the Strait of Georgia started August 7 and ended November 29. A detailed outline of the management actions that took place in 1996 in the Strait of Georgia troll fishery is in Table 2.

3.2.1 Chinook

The complete closure of the Strait of Georgia chinook troll fishery effectively eliminated the chinook catch. No chinook catch was recorded during the 1996 troll fishery (Tables 3-5).

3.2.2 Coho

Non-retention and non-possession requirements for coho in the 1996 Strait of Georgia troll fishery effectively eliminated the coho catch during the 1996 season. No catch was recorded during the 1996 troll fishery (Tables 3-5).

3.2.3 Chum

The chum fishery occurred between 0001 H, August 7 and 2359 H, August 17, in some sub-areas of Statistical Areas 13 and 18. The Strait of Georgia chum fishery operated concurrently with fisheries for sockeye and pink salmon. Chum abundance predictions had been poor at the outset of the season. The total Strait of Georgia chum catch for 1996 was 31 pieces, taken in Area 13 primarily in the first week of openings (Tables 3-5). No fall chum fishery openings proceeded due to lower than expected returns. The Strait of Georgia chum fishery was closed November 29 for the balance of the season.

3.2.4 Sockeye

The fishery opened at 0001 H August 7, in some sub-areas of Areas 13, 16 and 18. The 1996 management season for sockeye was difficult because of unexpectedly large returns of Fraser River stocks. The risk averse forecast of 1.56 million was far short of the estimated 4.3 million fish counted at the Mission hydroacoustic site. Test fishing indications did not yield reliable estimates of this unexpected surplus in advance of possible commercial troll fishing opportunities in the Strait of Georgia. The Fraser Panel was not able to schedule fisheries in the planning phase of the season because the pre-season forecast did not identify a harvestable surplus for commercial fisheries in Canada or the United States.

The fishery was extended to 2359 H, August 8 due to slow catch rates in open sub-areas of Areas 12, 13, 16 and 18. The fishery was re-opened at 0001 hr, August 16 for 24 hours, then extended for 24 hours to 2359 hr, August 17 due to slow catch rates.

The 1996 sockeye salmon troll fishery in the Strait of Georgia was conducted during two 48 hour openings. The final catch was estimated at 33,586 pieces with the majority of the catch from Area 13 and during the first week in August (Tables 3-5). Inside trollers harvested approximately 4% of the Canadian catch of Fraser River sockeye in 1996. Relatively low harvest rates on an unexpectedly high return accounted for the largest adult spawning escapement on record for this cycle. Approximately 2,178,000 adult sockeye were estimated to have reached spawning grounds, including 250,000 Upper Adams River sockeye, the largest observed escapement since 1909.

3.2.5 Pink

The season opened at 0001 hr, August 7 in the Strait of Georgia with pink salmon retention in some sub-areas of Areas 13, 16 and 18. The fishery was extended 24 hours to 2359 hr, August 8 due to slow catch rates. The fishery re-opened for sockeye with retention of pink salmon in the same sub-areas as in the initial opening at 0001 hr, August 16 for 24 hours and was extended 24 hours to 2359 hr, August 17. A total of 9,462 pink salmon was harvested in the Strait of Georgia salmon troll fishery in 1996, most from Area 13 and most caught during the initial opening (Tables 3-5).

3.3 STRAIT OF GEORGIA TROLL GEAR COUNTS

Aerial counts of trollers fishing in the Strait of Georgia were made throughout the 1996 season to enable timely catch estimation. The troll counts were from aerial overflights through a contract with Pacific Air Lines as well as local charters.

4. WEST COAST VANCOUVER ISLAND TROLL

4.1 BACKGROUND AND DEVELOPMENT OF FISHING PLANS

The 1996 West Coast Vancouver Island (WCVI) troll (Licence Area G) fishing plans (Appendix 2) were drawn up in pre-season meetings with the Outside Troll Advisory Committee (OTAC). This committee is comprised of Area G fishers and processors (representatives from the Pacific Trollers Association, Area G troll Association, the United Fishermen and Allied Workers Union and the Nuu-chah-nulth Tribal Council (NTC)). Input from OTAC included measures to reduce chinook encounters and associated mortalities and still provide for harvest opportunities in Area G (WCVI) for coho.

WCVI management plans for 1996 were developed under the following objectives:

1. Manage the troll fishery in a manner that will provide maximum protection to returning adult WCVI chinook stocks and ensure that WCVI chinook conservation objectives are met. Conservation of WCVI natural and enhanced adult chinook stocks will be paramount.

2. Manage fisheries using a risk adverse management strategy to ensure that management objectives and escapement goals are met.

3. Meet Aboriginal fisheries obligations.

4. Develop a coho fishing plan that will maximize the value of the catch.

5. Contribute to the Lower Strait of Georgia and Harrison River chinook conservation programs.

6. Maintain manageability and enforceability of the plan.

Trolling for coho with retention of pink and chum salmon was scheduled to start July 8, 1996 and was expected to end when the WCVI coho ceiling was reached, or sooner if domestic coho stock concerns were identified, or if chinook encounter rates and mortalities reached unacceptable levels. A summary of the catch ceilings and allocation is described in Table 6. Daily troll test boat positions are plotted for WCVI in Figure 15.

4.1.1 Chinook

There were severe conservation concerns with returning WVCI chinook stocks in 1996. Chinook non-retention and non-possession were in effect all season. There would be extensive closures of chinook sensitive areas in order to protect returning WCVI chinook and other chinook stocks. These closures included a corridor boundary along the West Coast of Vancouver Island, which generally followed the 40 to 60 fathom depth contour. In addition, all SWVI Conservation Areas would be closed except for Conservation Area F2 (Figs. 5-12).

This fishing plan was designed to provide the flexibility to make in-season adjustments as required. Chinook sensitive closed areas could be expanded, if required, or boundaries could be adjusted to provide more coho fishing opportunities in areas where chinook encounters were minimal.

4.1.2 Coho

The coho catch management range was 1.1 to 1.4 million pieces based on a pre-season abundance forecast range of 1.96 million to 3.72 million coho. It was assumed that the majority of the Strait of Georgia coho stocks would be present in the WCVI troll fishing area as in 1995. The minimum size limit for coho in Area G was 30 cm fork length.

Coho fishing was to commence at 0001 hr, July 8, 1996 and to continue seven days a week until the WCVI coho ceiling was reached. The fishery could be closed sooner if domestic coho stock concerns were identified or if chinook encounter rates and associated mortalities reached unacceptable levels during the coho troll fishery.

4.1.3 Chum

Abundance of chum returning to the WCVI was expected to be below average and no surplus was anticipated, therefore no directed chum fisheries were planned and no TAC was identified for WCVI chum in 1996. Chum catch would be incidental and fishing would commence at 0001 hr, July 8.

4.1.4 Sockeye

The pre-season forecast for Fraser River sockeye abundance was so poor that there was no WCVI sockeye allocation in 1996. Non-retention and non-possession of sockeye would be in effect for the WCVI salmon troll fishery. If in-season run size forecasts were above expectations and a commercial troll TAC was identified, allocation levels and fishing opportunities would be determined.

4.1.5 Pink

Trolling for pink salmon was scheduled to commence at 0001 H, July 8, 1996. This was an off-cycle year for southern bound (Fraser River) pink and there would be no directed pink fishery. No allocation was established and pink catches would be incidental.

4.2 CATCH AND IN-SEASON ACTIONS FOR WCVI

The troll season off WCVI started July 8 and ended October 7. A detailed outline of the management actions that took place in 1996 in the WCVI troll fishery is in Table 7.

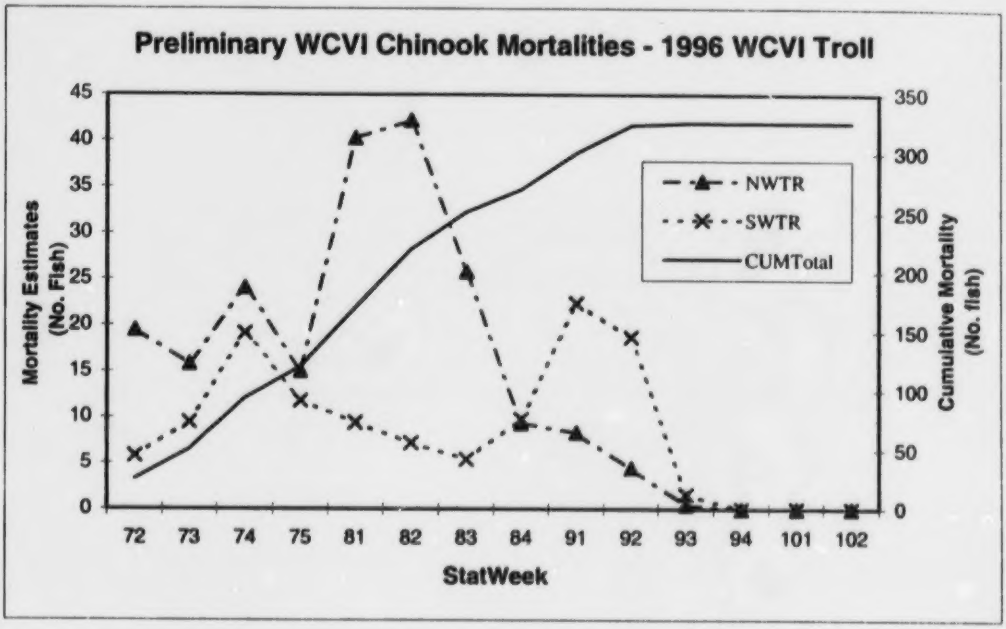
4.2.1 Chinook

The non-retention, non-possession requirements for chinook in the WCVI troll fishery were effective in eliminating the chinook catch in 1996. No catch was recorded during the directed WCVI coho fishery from July 8 to October 7 (Tables 8-10). Through the implementation of the Troll Monitoring Program constant updates on chinook encounter rates and shaker mortality of sub-legal coho were available to DFO fisheries managers, allowing for precise management actions in opening and closing specific Conservation Areas and Zones. The estimated mortality of WCVI chinook off the WCVI was 330 fish.

Estimates of encounter rates, total chinook mortality, and WCVI chinook mortality were calculated on a daily basis. Monte Carlo simulation was used (1000 iterations) to provide confidence limits for each of the estimates. The results are as follows:

Area	**Total Chinook Encounters**	**+/- 1 St. Deviation**
NTR	12,354	9,016-15,687
NWTR	25,591	16,149-42,736
SWTR	28,500	16,041-45,554
Area	**Total Chinook Mortalities**	**+/- 1 St. Deviation**
NTR	3,465	2,516-4388
NWTR	7,106	4,514-11,924
SWTR	8,028	4,473-12,846
Area	**WCVI Chinook Mortalities**	**+/- 1 St. Deviation**
NTR	139	101-176
NWTR	128	127-325
SWTR	202	62-220

Weekly and cumulative mortality estimates for WCVI chinook in NWTR and SWTR are as follows:



During the early part of the season the mortality estimates of WCVI chinook are higher in NWTR than in SWTR. It is important to note that after statistical week 84 (last week in August) the mortality estimates of WCVI chinook in SWTR becomes higher than NWTR, reflecting movement of mature fish down the coast toward the spawning grounds.

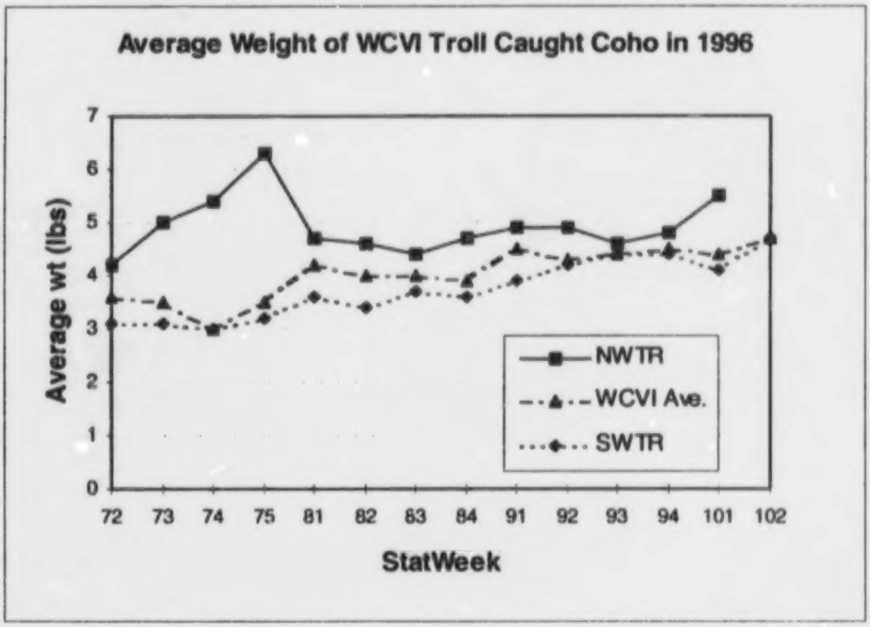
4.2.2 Coho

Coho fishing commenced July 8. The fishery was closed at 2359 H, October 7, due to a significant reduction in effort and in coho catch. A total of 792,576 coho pieces was harvested during the 1996 WCVI troll fishery (Tables 8-10). This was approximately 62 % of the coho management ceiling of 1.1 to 1.4 million coho established at the beginning of the season. The majority of the coho were caught during the first two weeks in August and mainly in Area 123.

Coho fishing was open seven days a week with the area inside the 50 fm depth contour along the coast and all areas inside the surfline closed initially except for zones 24 and 26 off of Kyuquot referred to as the Esperanza Box Boundary (Fig. 5). Of the 35 zones off WCVI only 14 were open at the start of the season. Test fishing was conducted in areas where the fleet operated and reports of low chinook encounters permitted an additional 4 zones to open on July 19 (Fig. 6). Continued testing indicated that chinook were being encountered in the southern portion of zone 24. This was designed as zone 24b and was closed on July 26 (Fig. 7). This closure extended to include waters inside Esperanza Box Boundary. However, a portion of zone 6 was opened as 6a along with zone 10 on the outer edge of the "Big Bank" since the chinook encounter rates were low in these areas. On August 5 zone 33 in Area 127 was opened (Fig. 8). Continued testing in 127 opened a portion of zone 32 as 32a (Fig. 9). Zone 32b was kept closed as a terminal area for returning chinook as was another terminal area, zone 24c. It was necessary to move boundaries in light of the relatively high chinook encounters by test–boats in those areas. During this time the outer portion of zone 8 was opened as 8a. Test–boat catches indicated that the chinook were located up on the shallower areas and gullies of the Big Bank or in zone 8, but were absent on the slope region of the Bank (zone 8a). Approaching mid- September chinook encounters were becoming less and managers opened a large number of closed areas. By September 13 only 4 zones located on the "Swiftsure Bank" remained closed (Fig. 10). Later that month , on September 21, the southwest edge of Swiftsure Bank (zone 3a) was opened for the duration of the fishery (Fig. 11). This was in response to low numbers of chinook and sub-legal coho shakers. On October 7 only 3 zones remained closed for the duration of the season.

The opening and closure of Conservation Zones along the West Coast of Vancouver Island was intended to provide a corridor of maximum protection to returning WCVI chinook stocks, while maximizing coho fishing opportunities. A summary of the boundary changes of the zones at the end of the season is in Figure 12.

The weight of WCVI troll caught coho during the 1996 season was determined from the MRP port sampling and complied by statistical week below:



The average weight of coho in NWTR was higher than for SWTR throughout the season. In SWTR the average weight of coho ranged from 3.1-4.7 lb with a mean weight of 3.7 lb. In NWTR the average weight of coho ranged from 4.2-6.3 lb with a mean weight of 4.9 lb.

4.2.3 Chum

The WCVI chum fishery commenced at 0001 hr, July 8 and closed at 1800 hr, October 20. The total catch was 4,592 pieces (Tables 8-10). The greatest proportion of the catch was made during the last three weeks of the season. A short directed chum fishery took place from 0800 hr, October 19 to 1800 hr, October 20 in Areas 21 and 121, to harvest Nitinat chum surplus to escapement and enhancement needs. The majority of the chum was caught in Area 124 and during the first week in October.

4.2.4 Sockeye

The WCVI sockeye fishery opened August 14 with the lifting of the non-retention, non-possession condition imposed at the outset of the WCVI salmon trolling season on July 8. On August 23 additional fishing areas were opened to provide more sockeye fishing opportunities in areas where chinook encounter rates had been minimal. Further openings of Conservation Areas were made September 13 and 21 as the sockeye catch remained well below the ceiling. The WCVI sockeye fishery closed at 2359 hr, October 7, with a total catch of 809 pieces for 1996 (Tables 8-10). This was approximately 3 % of the in-season Area G ceiling assignment of 30,000 pieces.

4.2.5 Pink

Fishing began at 0001 H, July 8 for WCVI pink salmon. As this was an off-cycle year for southern bound (Fraser River) pink there was no directed pink fishery. No pre-season pink allocation had been established and pink catches were incidental in the directed WCVI coho fishery. A total of 14,242 pieces were harvested by the closure of the fishery at 2359 hr, October 7 (Tables 8-10). The majority of the pinks were caught in Area 127 and during the last week in July.

4.3 WCVI TROLL GEAR COUNTS

Aerial counts of trollers fishing the WCVI were made throughout the 1996 season to help provide more timely estimates of troll effort. These effort estimates were then used in conjunction with CPE estimates obtained by dockside samplers and/or on-water "hails" to generate in-season estimates of troll catches. In 1996 troll counts were from regularly scheduled flights contracted with Provincial Air Lines (PAL). A trained observer accompanied each flight to identify and record all fishing vessels by area. Aerial overflight counts for the southwest of Vancouver Island were augmented by radar counts. Daily troll counts for SWTR and NWTR are presented in Figure16. At the start of the season the troll effort ranged between 150 and 250 vessels with one daily count reaching almost 300 trollers. However, as the season progressed the number of trollers dropped to between 100 and 150, and then to less than 100 near the end of the season.

5. JOHNSTONE STRAIT TROLL

5.1 BACKGROUND

Beginning in 1996, all B.C. salmon licence holders were required to permanently select one licence area and a single gear type. Johnstone Strait encompasses DFO Statistical Areas 11, 111, 12 and 13 for catch reporting and fishery management purposes, but these Statistical Areas are also included as parts of other troll management areas. Areas 11 and 111 are included in North Coast (Licence Area F), while Areas 12 and 13 are included in Strait of Georgia (Licence Area H). In times of high Fraser sockeye and pink inside diversion, the WCVI trollers (Licence Area G) are permitted to fish the northern portion of Area 12 and sometimes a small portion of Area 11. For the purposes of this report Johnstone Strait management actions and catch data are described separately from North Coast and Strait of Georgia. Assignment of licence and Statistical Areas is as follows:

1. Troll Licence Area F includes Statistical Areas 11 and 111.
2. Upper Statistical Area 12 is shared by both Area G and Area H troll fisheries. Area G licensed vessels are licensed to fish in Sub-areas 12-5 to 12-16.
3. Area G licensed vessels also fish West Coast Vancouver Island (Areas 20, 21, 23 to 27, and 121, 123 to 127.
4. Area H licensed vessels fish the Strait of Georgia / Johnstone Strait, Areas 12 to 19, 28 and 29.

5.2 SUMMARY OF CATCH AND IN-SEASON ACTIONS FOR JOHNSTONE STRAIT

The 1996 Johnstone Strait troll fishing plans (Appendices 1 and 2) were developed by DFO using pre-season expectations. A summary of the catch ceilings and allocation is described in Table 11. Table 12 summarizes the management actions taken in the 1996 Johnstone Strait troll fishery. Trolling was permitted from August 7 to August 17 in Areas 12 and 13. Areas 11 and 111 remained closed for the duration of the 1996 Johnstone Strait salmon troll fishery to provide maximum protection for returning WCVI chinook stocks. Non-retention and non-possession of chinook and coho was in effect during this fishery. Tables 13-14 summarize the catch in Johnstone Strait during the 96 hour fishery in 1996.

The fishery was opened initially for two days commencing August 7 and again for two days commencing August 16. The second opening was primarily conducted to optimize the harvest of Fraser River sockeye. The largest proportion of the sockeye harvest in Area 12 was taken during the first week of the fishery for 1,996 fish.

6. NORTH COAST TROLL

6.1 BACKGROUND AND DEVELOPMENT OF FISHING PLANS

The North Coast Troll Committee met on May 24, 1996 to develop the North Coast (Licence Area F) troll fishing plan (Appendix 3). The overriding priority for this fishery was to provide maximum protection for returning WCVI chinook stocks and also to continue with measures in support of conservation of Upper Skeena coho. This plan was modified in 1996 with guidelines implementing effort limitations Upper Skeena coho, yet fishing opportunities for pink, chum and Skeena River sockeye were permitted. In the North Coast area access to Fraser River sockeye was limited to assessment purposes only. There were no Pacific Salmon Treaty fishing arrangements in place for the North Coast for the beginning of the 1996 troll season.

The start of the troll fishery was delayed until July 8 and the Central Coast (Areas 6 to 10) remained closed until August 1. Areas 11 and 111 were closed for the entire season. These measures were undertaken to minimize chinook encounter rates and maximize opportunities on harvestable surpluses of coho, sockeye, pink and chum. Non-retention and non-possession of chinook would be in effect for the entire North Coast troll fishing season.

Fishing areas for sockeye were planned to be consistent with those areas opened in 1995 for Skeena River sockeye. The early season closure for Upper Skeena coho would remain in effect for the 1996 season. Adjustments to this closure could be made in-season to allow for expanded harvest opportunities for Skeena River sockeye. In order to provide for maximum protection of WCVI chinook, the following measures were implemented:

1. Those portions of Areas 1 and 101 inside the Chinook Redline Boundary were closed for the season.

2. Area 2W remained closed until opportunities to harvest inside the Redline Areas could be explored for anticipated fall chum and coho surpluses.

3. Areas 6 to 10 inside the surfline had chinook non-retention and non-possession imposed.

4. Areas 11 and 111 remained closed for the season.

5. A chinook encounter rate monitoring program was in place for the fishery and in-season changes to the fishing plan were made as required to ensure that WCVI chinook conservation objectives were met.

A summary of the catch ceilings and allocation is described in Table 15.

6.1.1 Chinook

There were severe conservation concerns with returning WCVI chinook stocks in 1996. Management actions required the implementation of non-retention and non-possession of chinook salmon in Area F - North Coast for the 1996 season as well as closures in chinook red-line areas.

The management intent for the 1996 North Coast troll fishery was to address Canadian stock concerns. The fishing plan was designed to minimize chinook encounter rates and shakers while providing the opportunity to extend the season to harvest other species. In response to recommendations from the North Coast Troll Management Committee, modifications to some closed areas were implemented to provide harvest opportunities on anticipated fall coho and chum surpluses. Trollers were advised that these opportunities could be limited in area and time duration and that such fisheries could close on short notice. Open Areas were monitored for shaker incidence and were subject to effort controls. No management actions (closures) were instituted as the daily chinook encounter rates were under the recommended limitations.

6.1.2 Coho

Skeena River coho returns were expected to be poor based on recent survival trends. The Skeena coho conservation actions implemented in 1995 remained in effect for the 1996 season to further the objective of increasing escapements to the Upper Skeena River. Effort in 1995 far exceeded recommended levels in the Sub-area 3-1 periphery of the Skeena River Coho Closure. Accordingly, a guideline effort limitation of 50 boats per day or 350 boats per week was established for Sub-area 3-1. If these effort levels were exceeded, non-retention of coho was to be implemented during the troll fishery.

The Skeena River coho closure would be lifted when possible to provide for fall coho harvest opportunities. Criteria utilized to lift this closure would include strong indications of overall abundance of coho stock in the Dixon Entrance and Hecate Strait approaches to the terminal area, shaker incidence and meeting desired escapement indices in the Skeena River test fishery.

6.1.3 Chum

No restrictions were anticipated for North Coast chum during 1996, however, chum abundance was expected to be below average with no surpluses projected.

6.1.4 Sockeye

The outside troll catch ceiling had been established as 5% of the Areas 1, 3, 4 and 5 all-gear, non-Fraser sockeye catch. Returns of North Coast sockeye were expected to be average to above average for 1996. Opportunities were provided to harvest Skeena River sockeye. There were no fisheries directed on southern-bound (Fraser River) sockeye stocks, therefore, non-retention and non-possession of sockeye in Areas 7 to 10 were in effect for 1996, except during net-fishing times and areas.

6.1.5 Pink

North Coast pink returns were expected to be below average for 1996. Skeena River pink stocks were also expected to be low in 1996. There was no Pacific Salmon Treaty catch ceiling on Area 1 pinks this year. The fishing plan was developed so that if Skeena River and Nass River pink returns were at a low level, then restrictions would be placed on troll fisheries.

6.2 CATCH AND IN-SEASON ACTIONS FOR THE NORTH COAST

The troll season on the North Coast started July 8 and ended September 23. A detailed outline of the management actions that took place in 1996 in the North Coast troll fishery is in Table 16.

6.2.1 Chinook

The non-retention, non-possession requirements for chinook in the North Coast troll fishery were effective in eliminating the chinook catch in 1996. No catch was recorded during the 1996 North Coast troll fishery from July 8 to September 23 (Table 17-19). The use of Conservation Zone closures in combination with the hail-in program allowed the North Coast troll fishery to proceed effectively while achieving WCVI chinook conservation goals. Total estimated mortality of WCVI chinook in the North Coast troll fishery was 139 fish.

6.2.2 Coho

Coho fishing commenced as scheduled on July 8. The fishery was closed at 2359 hr, September 23 due to below average abundance of later-timed coho stocks. The Dundas Island aerial gear count indicated 94 trollers operating on September 19. This count was far in excess of the recommended level of 50 boats per day, therefore the inner portion of Area 3 was closed for conservation of the later-timed stocks. This action was also based on observations of poor in-river recreational catch and below average commercial gillnet catch.

A total of 436,134 coho (pieces) was harvested during the 1996 North Coast troll fishery ((Table 17-19). The primary harvest area was Statistical Area 1, with a catch of 252,436 pieces (58 %). Statistical Area 3 yielded the next most abundant harvest of 99,599 pieces (23 %). The 1996 coho harvest was approximately 69 % of the average catch of the previous ten years.

6.2.3 Chum

Chum fishing commenced as scheduled on July 8. The chum fishery closed on September 23 (Table 17-19). The North Coast troll catch of chum was 41,806 pieces; approximately 55 % of this total was harvested from Statistical Area 1, and approximately 34 % from Statistical Area 3 (Table 17-19). This was the second lowest harvest level during the previous ten years; a low catch level had been predicted by DFO at the outset of the season.

6.2.4 Sockeye

The North Coast troll fishery opened on July and closed on September 23. Trolling for sockeye was permitted in Statistical Areas 1, 3, 5, and 101, 102, 103, 104 and Subarea 102-1. Action was taken to permit a continued fishery on Skeena River sockeye stocks while harvesting only in Areas which were determined to be clear of Fraser River stocks. The total sockeye harvest during the 1996 North Coast salmon troll fishery was 33,882 pieces; the lowest catch since 1984 (Table 17-19). Approximately 55 % of this total were harvested in Statistical Area 1 and approximately 33 % were taken in Statistical Area 3.

The troll fleet was requested, through a Notice to Industry July 22, to participate in an assessment fishery in Area 4 to evaluate the ability to selectively harvest sockeye. Ten boats participated between August 1 and 5 inclusive. Observers were aboard each boat and the use of barbless hooks was mandatory. The assessment fishery was suspended due to poor catch; sockeye comprised only 8 % of the total catch.

6.2.5 Pink

The troll fishery on the North Coast, Area F, commenced on July 8 and was closed on September 23. The total catch of pink salmon during this fishery was 964,073 pieces (Table 17-19). Approximately 76 % of the total catch were harvested in Statistical Area 1, and 18 % of the total catch was harvested in Statistical Area 3. The total catch for 1996 was 56 % of the average for the previous ten years.

7. ACKNOWLEDGEMENTS

We thank Leroy Hopwo and Dave Rekdal for kindly reviewing the draft of this manuscript and providing helpful comments.

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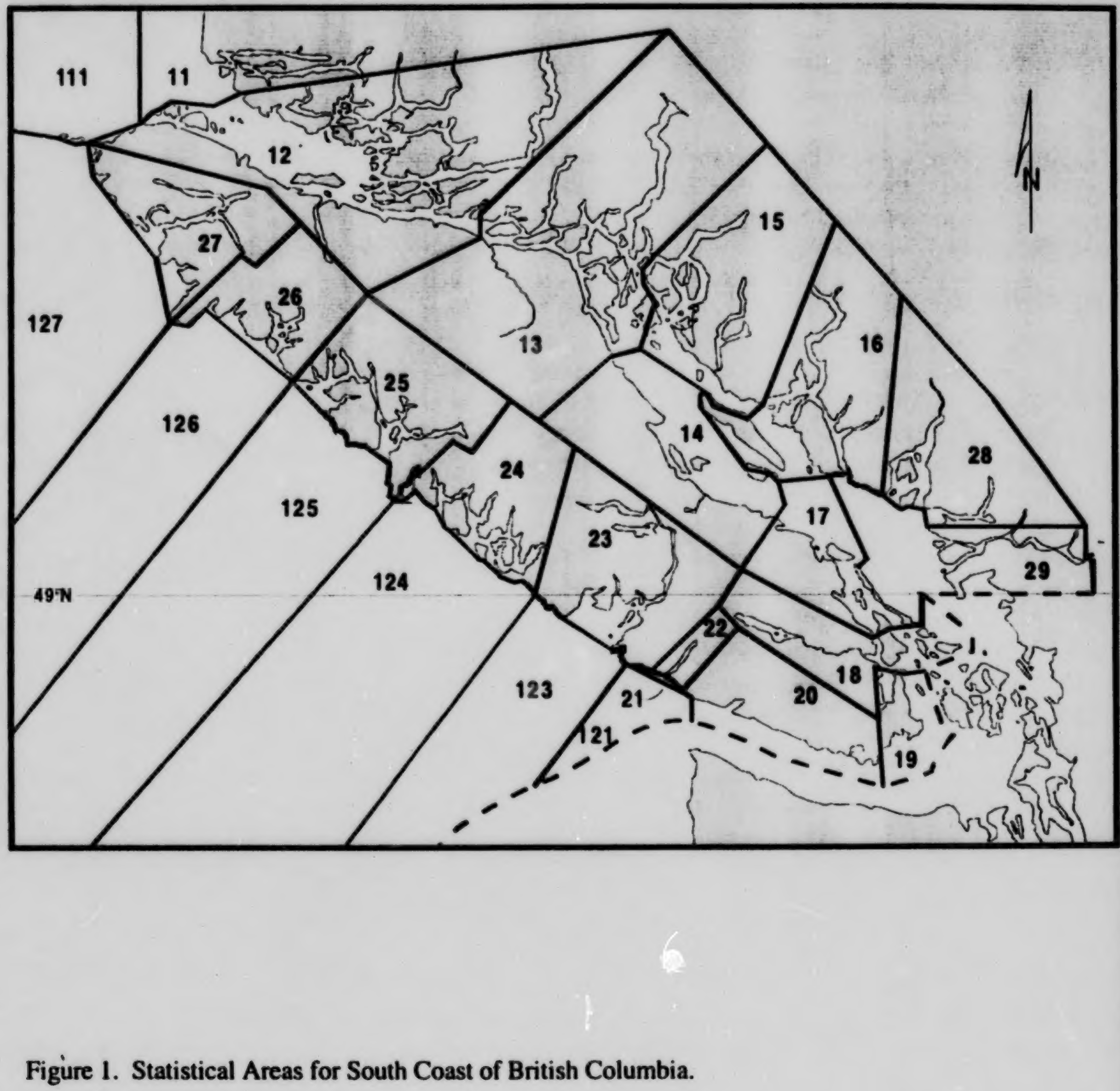


Figure 1. Statistical Areas for South Coast of British Columbia.

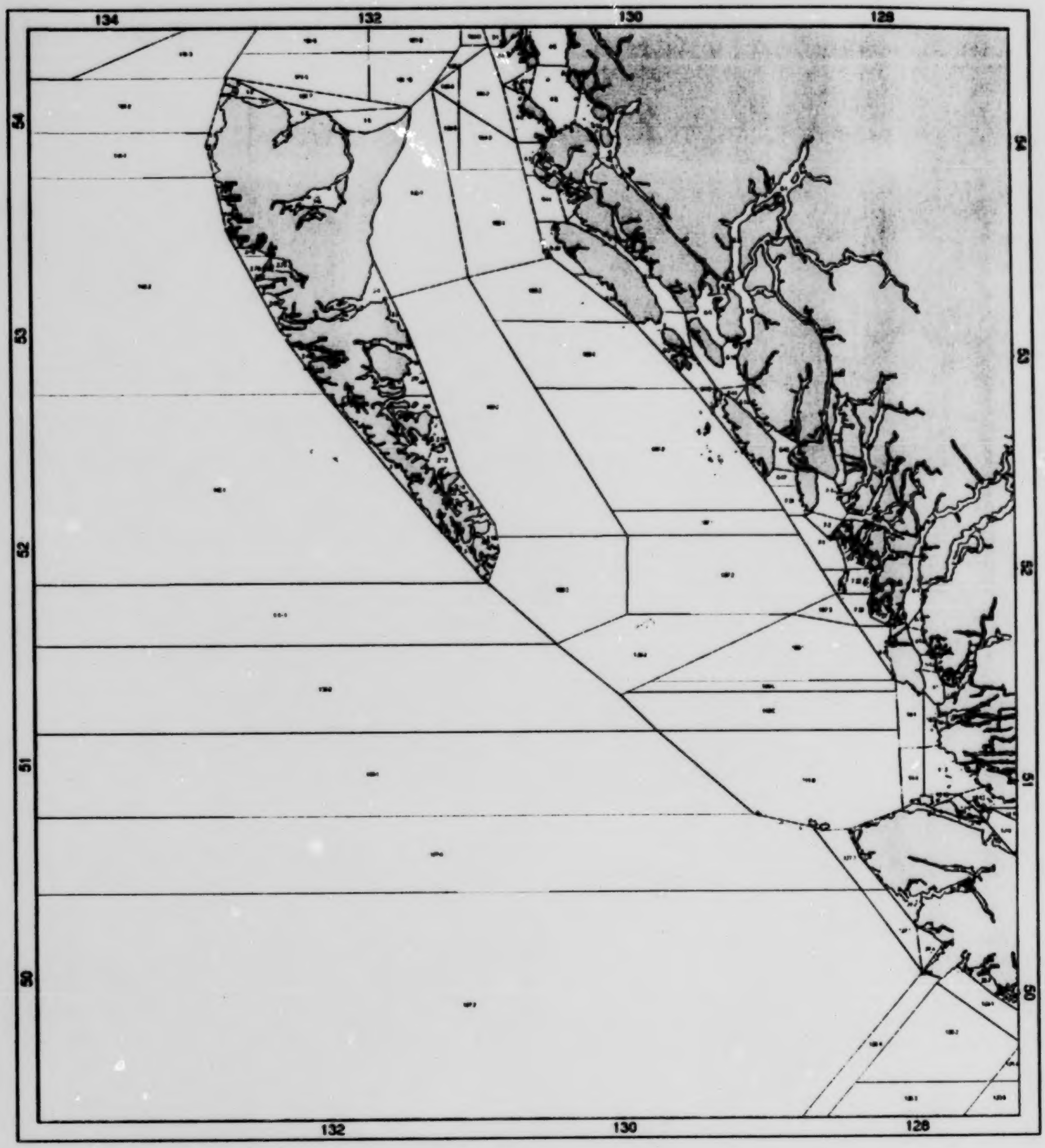
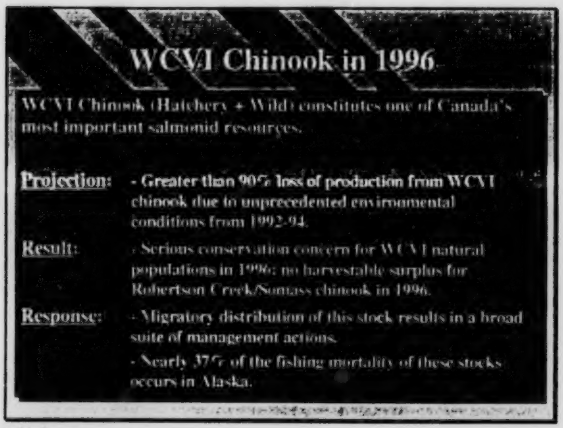


Figure 2. Statistical Areas for North and Central Coast of British Columbia.



WCVI Chinook in 1996

WCVI Chinook (Hatchery + Wild) constitutes one of Canada's most important salmonid resources.

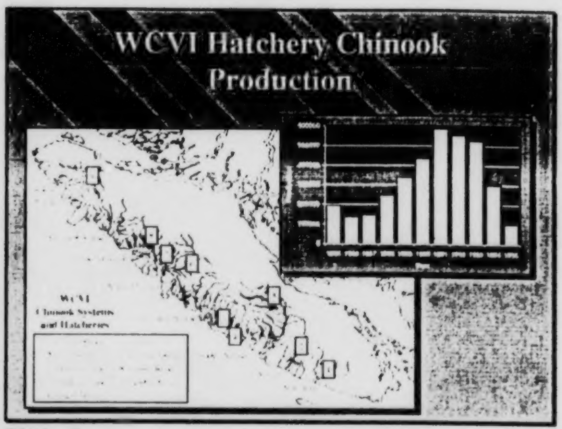
Projection: - Greater than 90% loss of production from WCVI chinook due to unprecedented environmental conditions from 1992-94.

Result: - Serious conservation concern for WCVI natural populations in 1996; no harvestable surplus for Robertson Creek/Somass chinook in 1996.

Response: - Migratory distribution of this stock results in a broad suite of management actions.

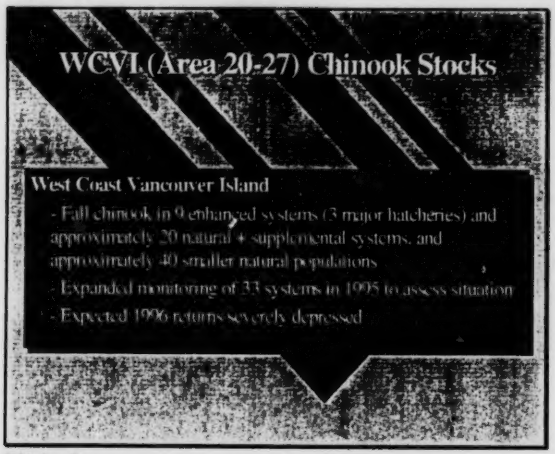
- Nearly 37% of the fishing mortality of these stocks occurs in Alaska.

Slide 1.



WCVI Hatchery Chinook Production

Slide 2.

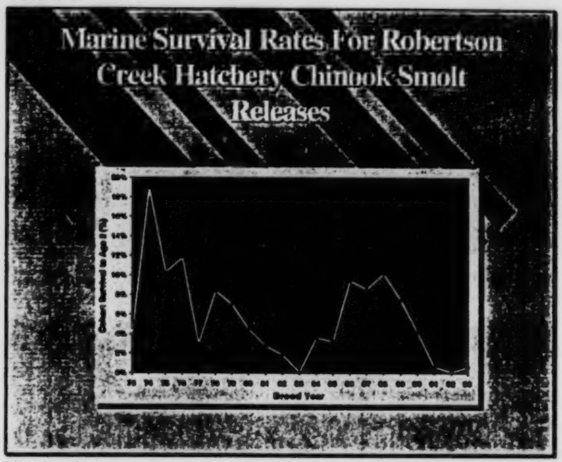


WCVI (Area 20-27) Chinook Stocks

West Coast Vancouver Island

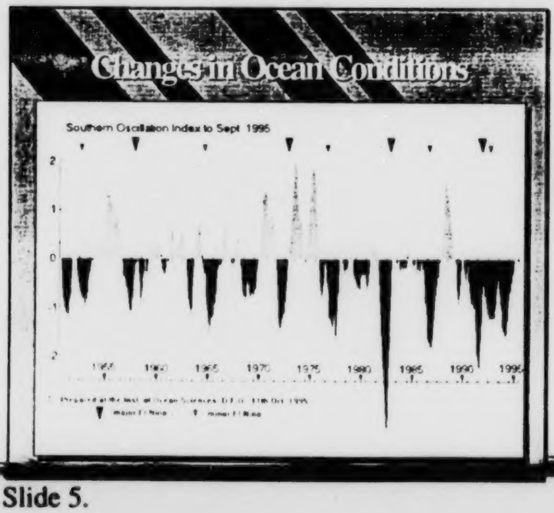
- Fall chinook in 9 enhanced systems (3 major hatcheries) and approximately 20 natural + supplemental systems, and approximately 40 smaller natural populations
- Expanded monitoring of 33 systems in 1995 to assess situation
- Expected 1996 returns severely depressed

Slide 3.



Marine Survival Rates For Robertson Creek Hatchery Chinook Smolt Releases

Slide 4.



Changes in Ocean Conditions

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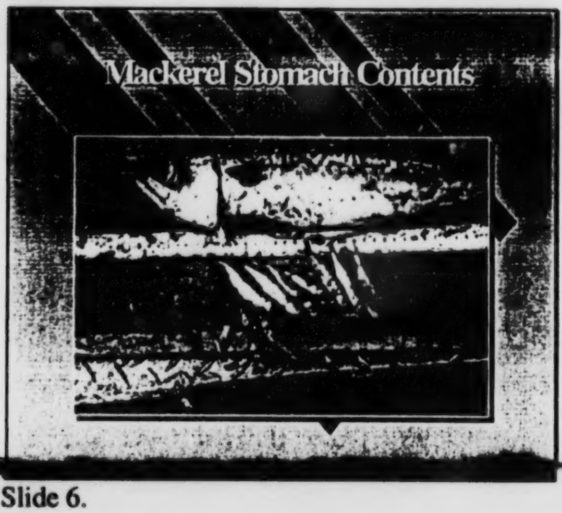
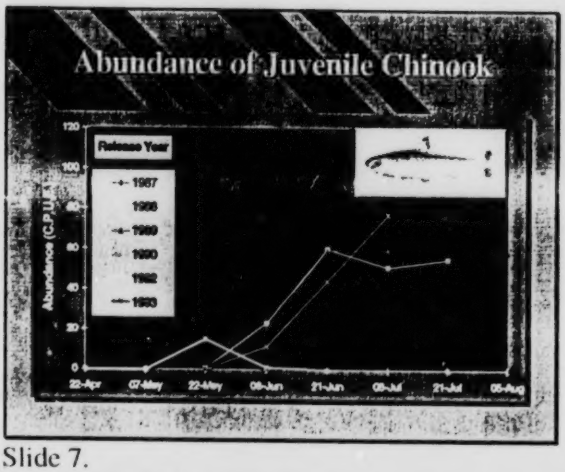


Mackerel Stomach Contents

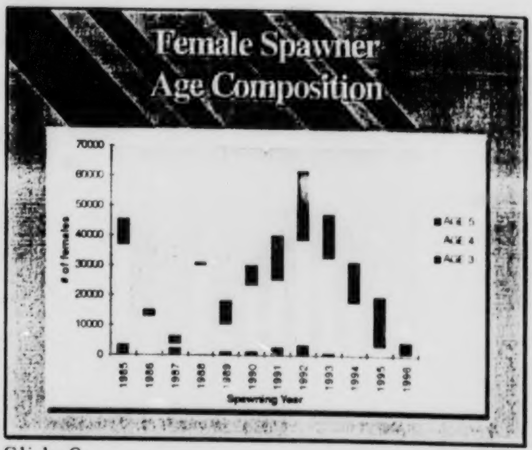
Slide 6.

Figure 3. Media presentation outlining the status of chinook for 1996.



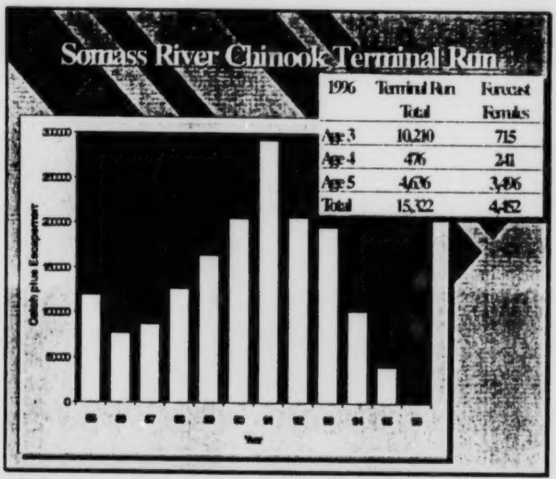
Abundance of Juvenile Chinook

Slide 7.



Female Spawner Age Composition

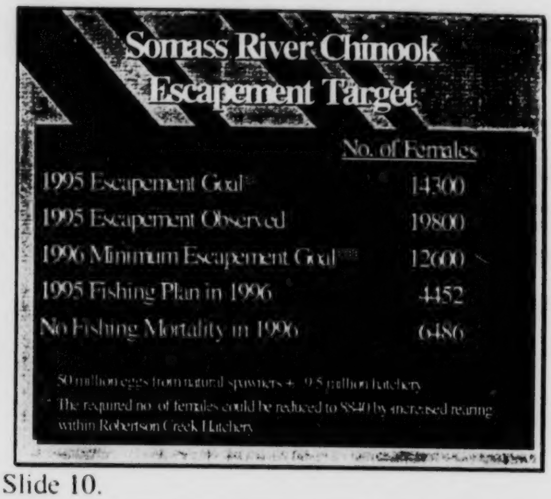
Slide 8.



Somass River Chinook Terminal Run

1996	Terminal Run Total	Forecast Females
Age 3	10,210	715
Age 4	476	241
Age 5	4,636	3,496
Total	15,322	4,452

Slide 9.



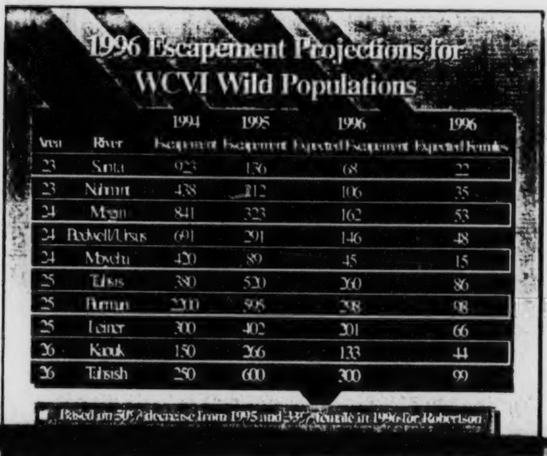
Somass River Chinook Escapement Target

	No. of Females
1995 Escapement Goal*	14300
1995 Escapement Observed	19800
1996 Minimum Escapement Goal**	12600
1995 Fishing Plan in 1996	4452
No Fishing Mortality in 1996	6486

* 50 million eggs from natural spawners + 9.5 million hatchery

** The required no. of females could be reduced to 8840 by increased rearing within Robertson Creek Hatchery

Slide 10.

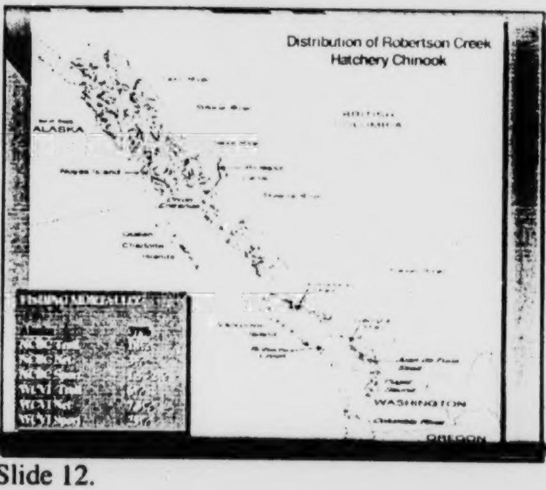


1996 Escapement Projections for WCVI Wild Populations

Area	River	1994 Escapement	1995 Escapement	1996 Expected Escapement	1996 Expected Females
23	Sarita	923	136	68	22
23	Nahmint	438	212	106	35
24	Megin	841	323	162	53
24	Bedwell/Ursus	691	291	146	48
24	Moyeha	420	89	45	15
25	Tahsis	380	520	260	86
25	Burman	2200	595	298	98
25	Leiner	300	402	201	66
26	Kaouk	150	266	133	44
26	Tahsish	250	600	300	99

- Based on 50% decrease from 1995 and 33% female in 1996 for Robertson

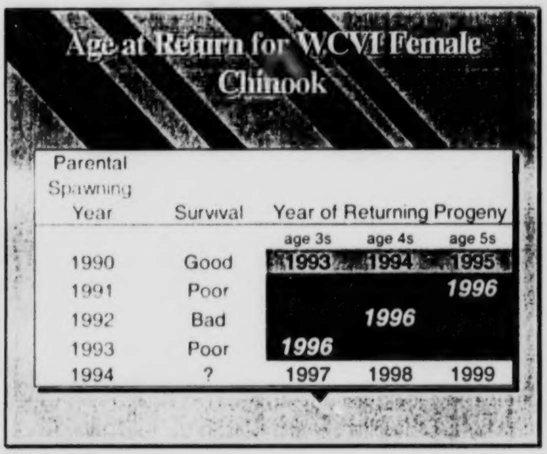
Slide 11.



Distribution of Robertson Creek Hatchery Chinook

Slide 12.

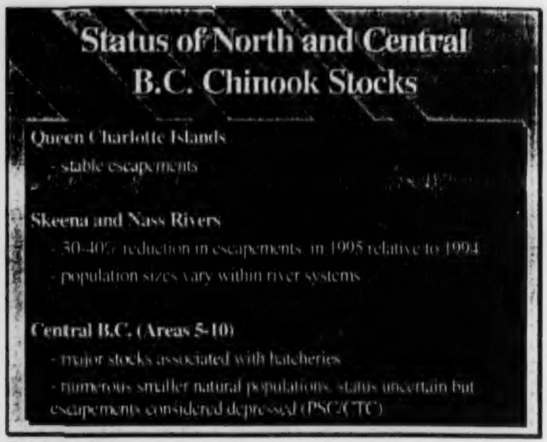
Figure 3. (Cont'd).



Age at Return for WCVI Female Chinook

Parental Spawning Year	Survival	Year of Returning Progeny		
		age 3s	age 4s	age 5s
1990	Good	1993	1994	1995
1991	Poor			1996
1992	Bad		1996	
1993	Poor	1996		
1994	?	1997	1998	1999

Slide 13.



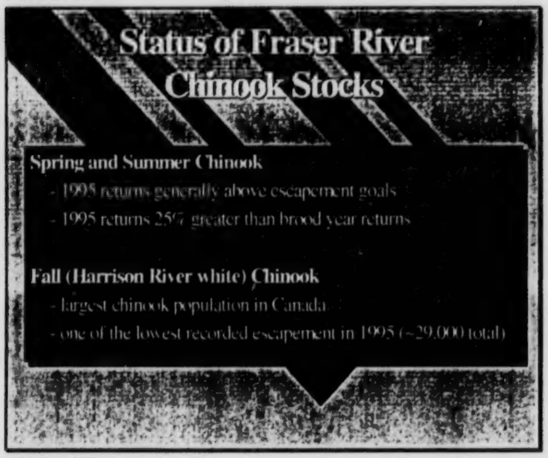
Status of North and Central B.C. Chinook Stocks

Queen Charlotte Islands
- stable escapements

Skeena and Nass Rivers
- 30-40% reduction in escapements in 1995 relative to 1994
- population sizes vary within river systems

Central B.C. (Areas 5-10)
- major stocks associated with hatcheries
- numerous smaller natural populations, status uncertain but escapements considered depressed (PSC/CTC)

Slide 14.

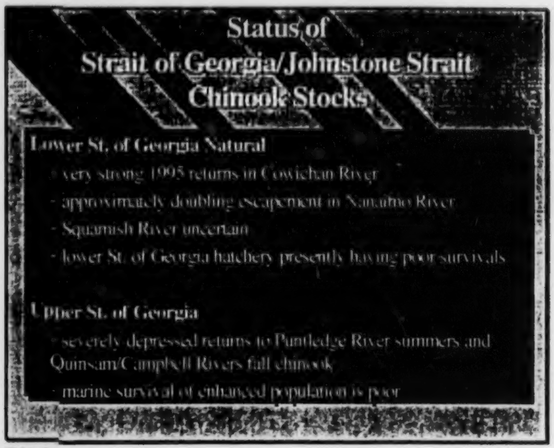


Status of Fraser River Chinook Stocks

Spring and Summer Chinook
- 1995 returns generally above escapement goals
- 1995 returns 25% greater than brood year returns

Fall (Harrison River white) Chinook
- largest chinook population in Canada
- one of the lowest recorded escapement in 1995 (~29,000 total)

Slide 15.

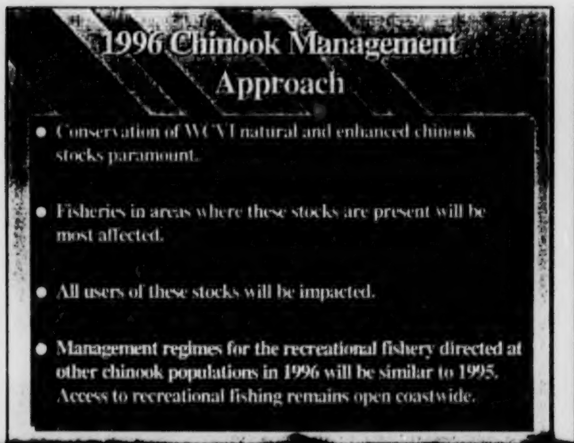


Status of Strait of Georgia/Johnstone Strait Chinook Stocks

Lower St. of Georgia Natural
- very strong 1995 returns in Cowichan River
- approximately doubling escapement in Nanaimo River
- Squamish River uncertain
- lower St. of Georgia hatchery presently having poor survivals

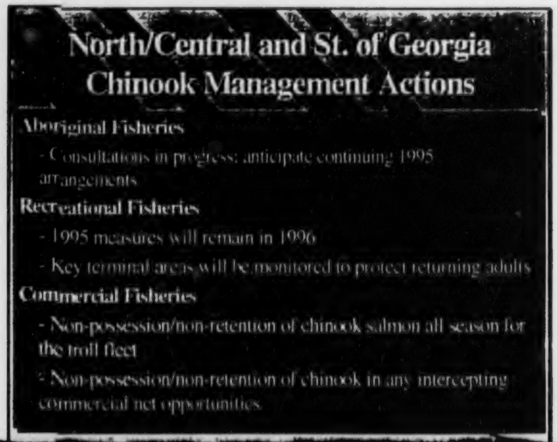
Upper St. of Georgia
- severely depressed returns to Puntledge River summers and Quinsam/Campbell Rivers fall chinook
- marine survival of enhanced population is poor

Slide 16.



1996 Chinook Management Approach

- Conservation of WCVI natural and enhanced chinook stocks paramount.
- Fisheries in areas where these stocks are present will be most affected.
- All users of these stocks will be impacted.
- Management regimes for the recreational fishery directed at other chinook populations in 1996 will be similar to 1995. Access to recreational fishing remains open coastwide.



North/Central and St. of Georgia Chinook Management Actions

Aboriginal Fisheries
- Consultations in progress: anticipate continuing 1995 arrangements

Recreational Fisheries
- 1995 measures will remain in 1996
- Key terminal areas will be monitored to protect returning adults

Commercial Fisheries
- Non-possession/non-retention of chinook salmon all season for the troll fleet
- Non-possession/non-retention of chinook in any intercepting commercial net opportunities.

Slide 17. **Slide 18.**

Figure 3. (Cont'd).

Management Actions for WCVI Chinook Stocks

Queen Charlotte Islands

Aboriginal Fisheries

- Consultations in progress: redirect Section 35 requirements to other salmon species

Recreational Fisheries

- Non-possession/non-retention of chinook salmon for all season (June 1 to October 31)

Commercial Fisheries

- Non-possession/non-retention of chinook salmon all season for the troll fleet

- No commercial net fisheries are planned for 1996

Slide 19.

Management Actions for WCVI Chinook Stocks

West Coast Vancouver Island

Aboriginal Fisheries

- Consultations in progress; redirect Section 35 requirements to other salmon species

Recreational Fisheries

- Non-possession/non-retention of chinook salmon effective July 15 to October 31 above Estevan Point

- Non-possession/non-retention of chinook salmon effective July 29 to October 31 below Estevan Point to Sheringham Point

Commercial Fisheries

-Non-possession/non-retention of chinook salmon all season for the troll fleet

- No commercial net fisheries are planned for 1996

Slide 20.

Chinook Summary

- Environmental/Ocean conditions primarily responsible for poor marine survival of WCVI stocks.
- A substantial portion of these stocks (37%) are harvested in SE Alaska.
- Stringent conservation actions in Canada are necessary to ensure the quickest possible recovery of these stocks.
- Management actions are directed primarily towards conserving WCVI chinook stock complex and will benefit other stocks of concern.
- Fishing opportunities remain for other salmon species and other fishes throughout the whole coast.
- Opportunities will be maintained for chinook fisheries which do not impact the WCVI stocks.

Slide 21.

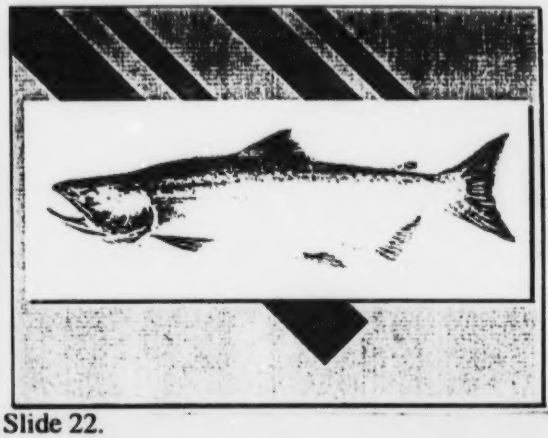


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Figure 3. (Cont'd).

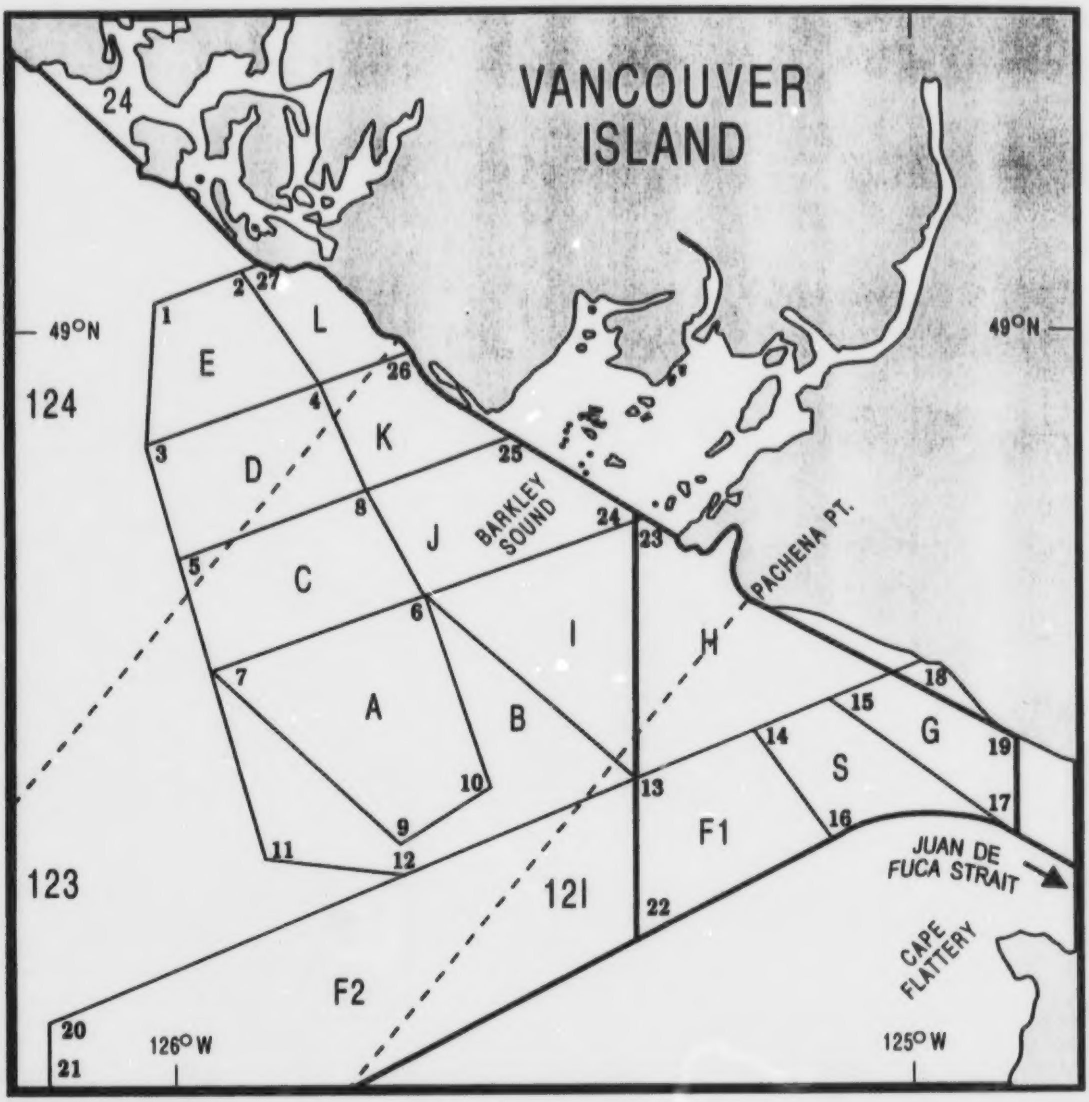


Figure 4. Conservation areas for the West Coast Vancouver Island troll fishery for 1996.

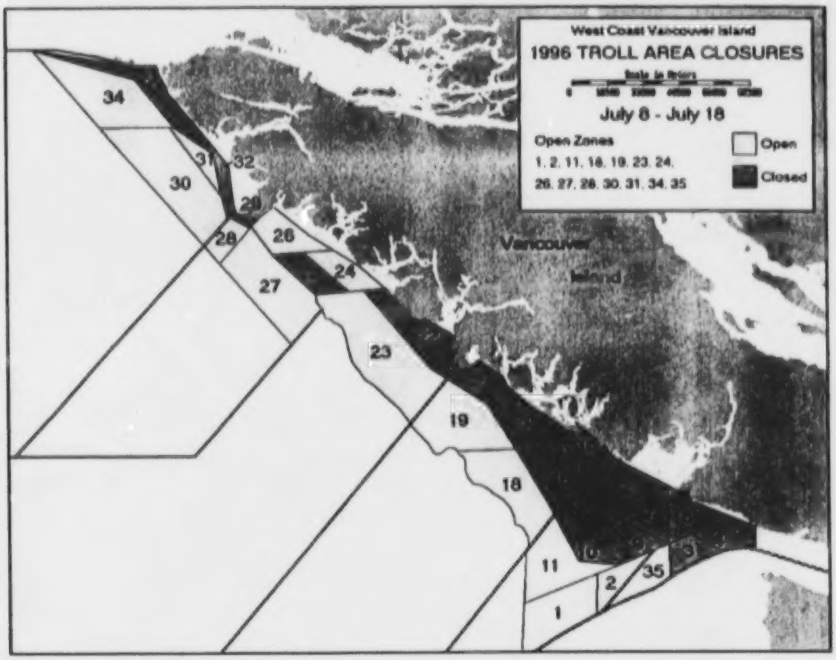


Figure 5. Troll area closures from July 8-18, 1996.

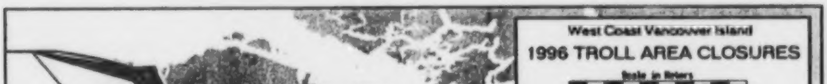


Figure 6. Troll area closures from July 19-25, 1996.

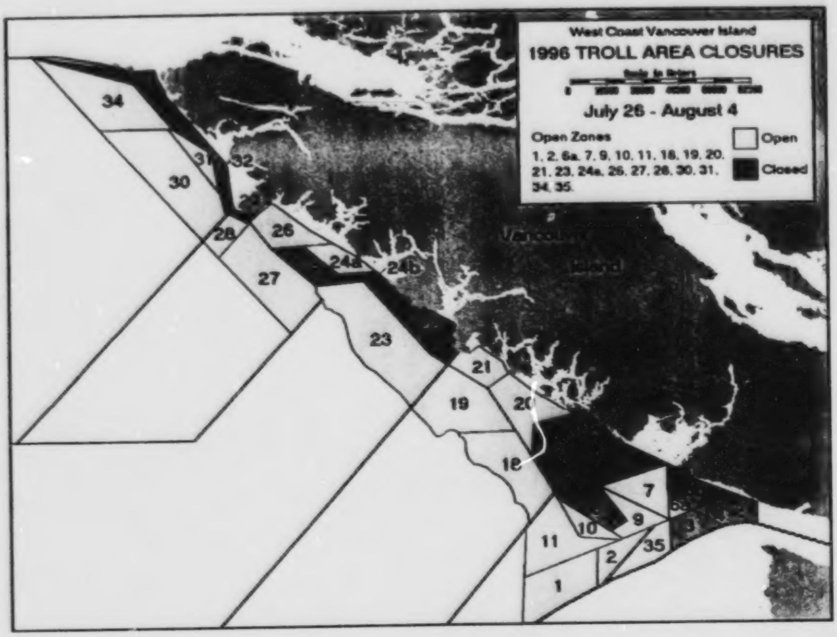


Figure 7. Troll area closures from July 26-August 4, 1996.

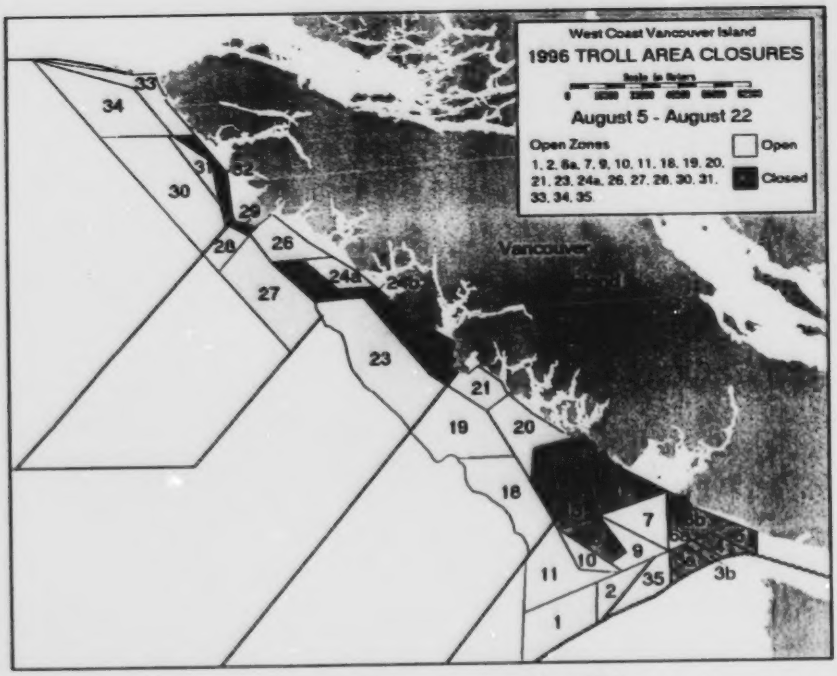


Figure 8 . Troll area closures from August 5-22, 1996.

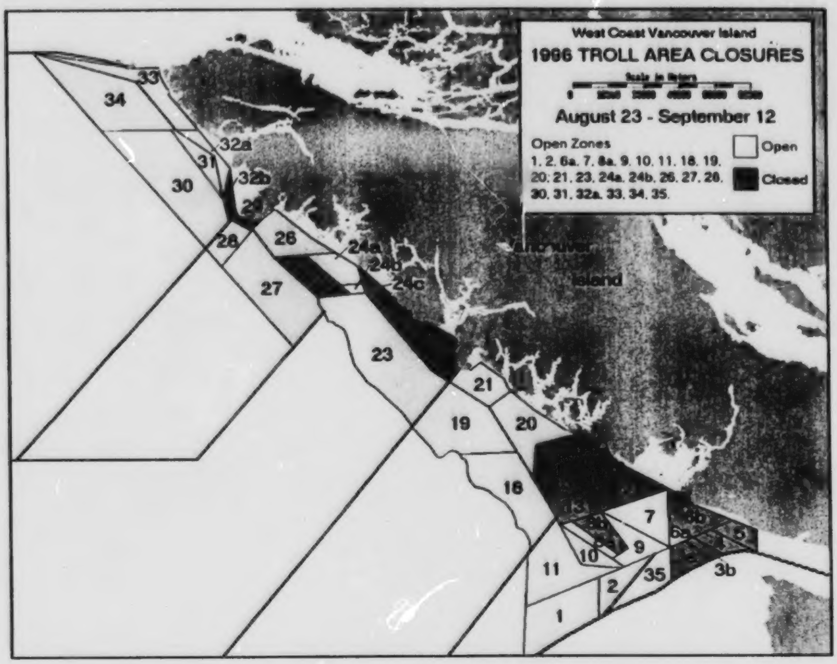


Figure 9. Troll area closures from August 23-September 12, 1996.

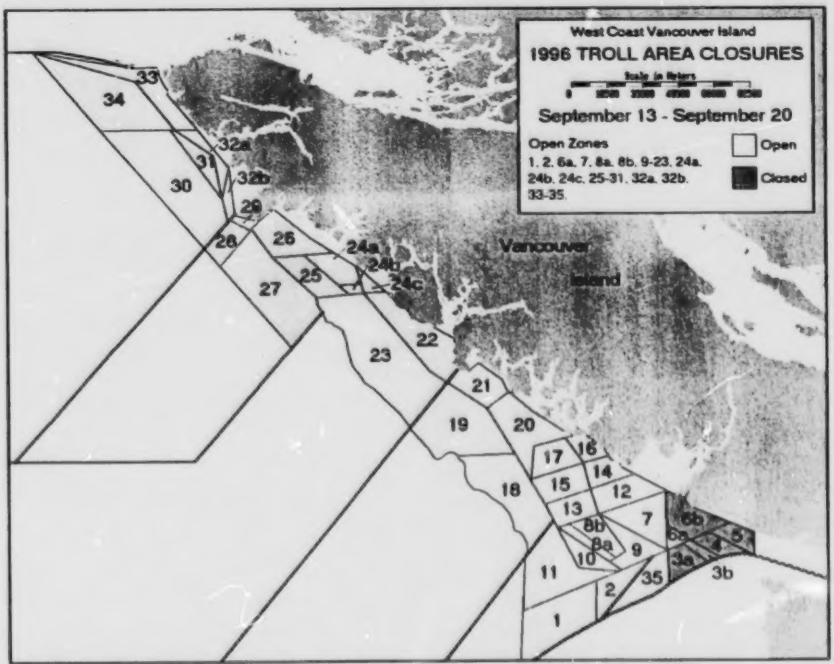


Figure 10. Troll area closures from September 13-20, 1996.

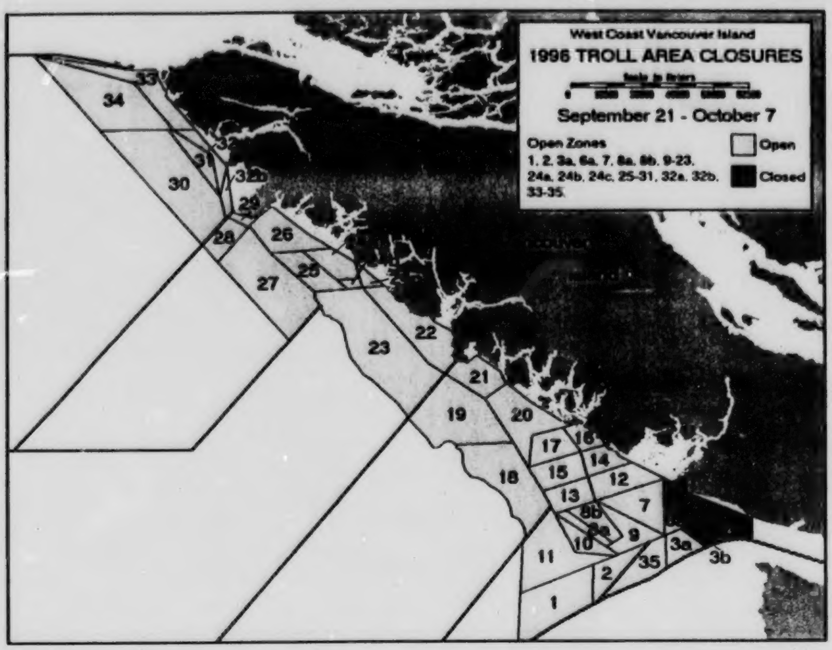


Figure 11. Troll area closures from September 21-October 7, 1996.

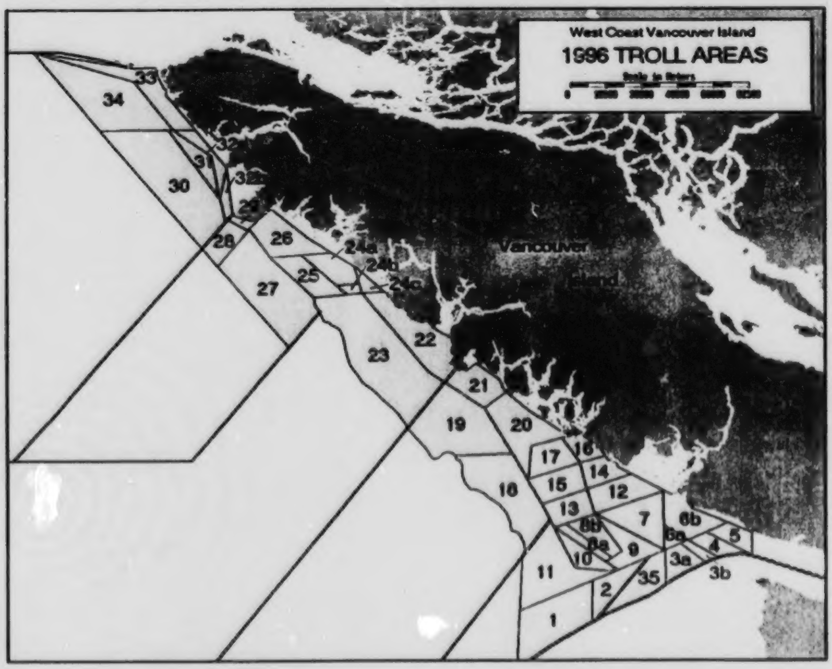


Figure 12. Summary of the 1996 WCVI troll areas modified in-season.

1996 TROLL LOGBOOK INSTRUCTIONS:
Chinook Encounter Program

DAILY LOGFORM DATA:

The logform is divided into 3 time periods (A, B and C). For each day of fishing, please record:

1) **VESSEL I.D.#, Vessel Name and CFV#**
2) **DAY and MONTH**
3) **FREEZING, DAYFISHING OR ICEFISHING**

FOR EACH OF THE THREE TIME PERIODS PLEASE RECORD:

4) **FISHING HOURS**
5) **ENCOUNTER DATA/CATCH DATA:** by species, and
6) **LOCATION** of encounter/catch by:

-latitude/longitude or Loran at the **start** and **end** of each of the **three time periods**, (or most frequently fished lat/long or loran area), and,
-zone # fished (from the map provided).

NOTE: Please ensure that the latitude/longitude or Loran are recorded as these are essential for post season evaluation of the fishery.

7) **OTHER CATCH FOR DAY:** please record other catch such as steelhead, or groundfish.
8) **COMMENTS**: to include any relevant information concerning fishing operations and dates and places of deliveries, running time, water temperature, etc.

DAILY PHONE-IN DATA:

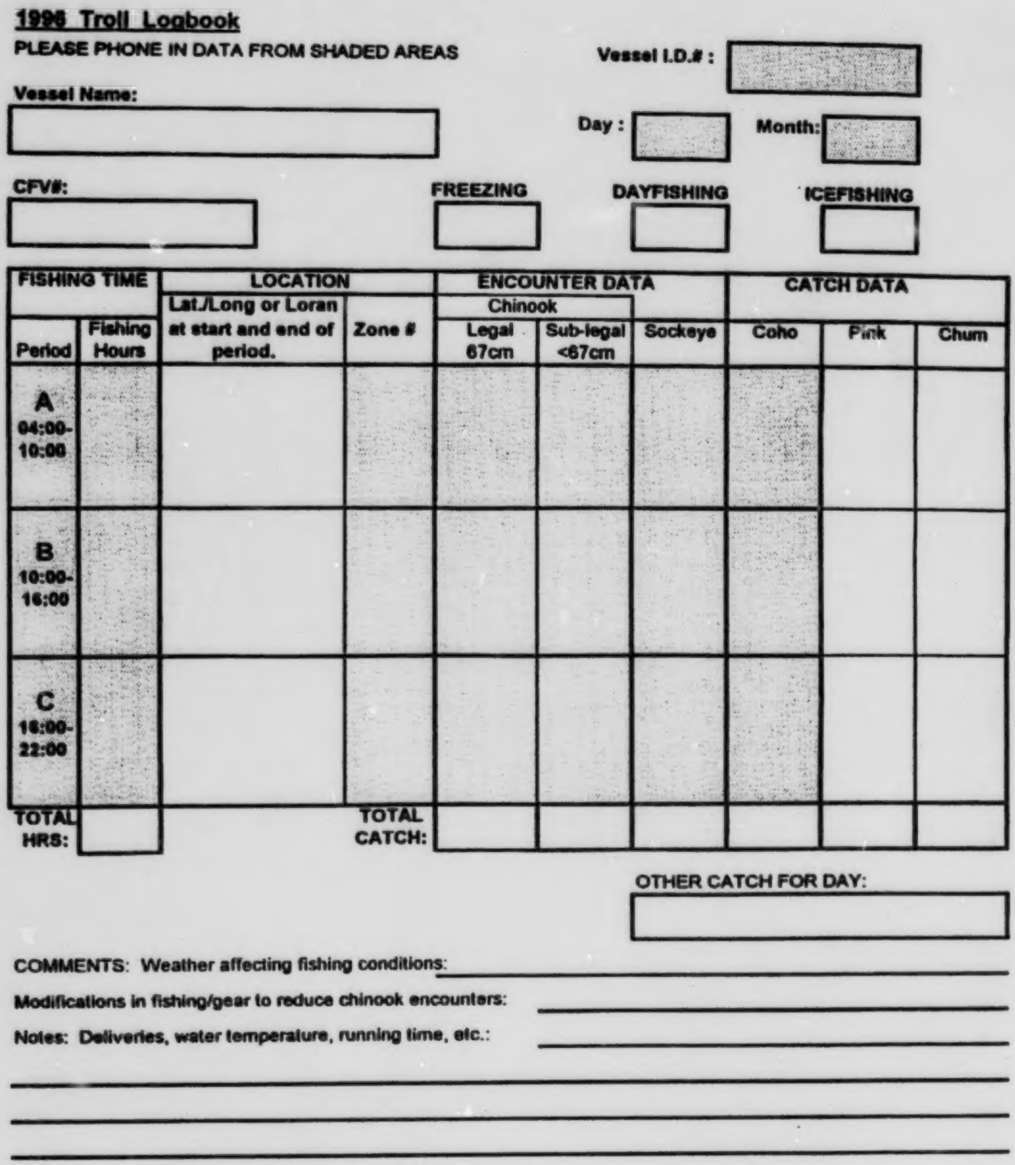
After each day of fishing, please phone in the data from the **shaded areas on the logform** to: **Tannia Ellingham of BTE Enterprises (phone line being installed).** For questions regarding the transmission contact her at 526-1547.

The data phoned in should include the following:

-VESSEL I.D. #,
-DAY, MONTH,
and for each of the three time periods, please report:
-FISHING HOURS
-CHINOOK ENCOUNTER DATA (LEGAL/SUB-LEGAL) & SOCKEYE ENCOUNTER DATA, AND COHO CATCH BY:
-LOCATION (ZONE #).

At the end of the season please contact the P.T.A. office (273-4213) for instructions on turning in your logbooks. Good fishing to you all.

Figure 13. Instruction sheet for the 1996 troll logbooks.



1996 Troll Logbook

PLEASE PHONE IN DATA FROM SHADED AREAS

Vessel I.D.# :

Vessel Name:

Day :

Month:

CFV#:

FREEZING ☐

DAYFISHING ☐

ICEFISHING ☐

FISHING TIME		LOCATION		ENCOUNTER DATA			CATCH DATA		
				Chinook					
Period	Fishing Hours	Lat./Long or Loran at start and end of period.	Zone #	Legal 67cm	Sub-legal <67cm	Sockeye	Coho	Pink	Chum
A 04:00- 10:00									
B 10:00- 16:00									
C 16:00- 22:00									
TOTAL HRS:			TOTAL CATCH:						

OTHER CATCH FOR DAY:

COMMENTS: Weather affecting fishing conditions: ______

Modifications in fishing/gear to reduce chinook encounters: ______

Notes: Deliveries, water temperature, running time, etc.: ______

Figure 14. Example of the 1996 troll logbook form.

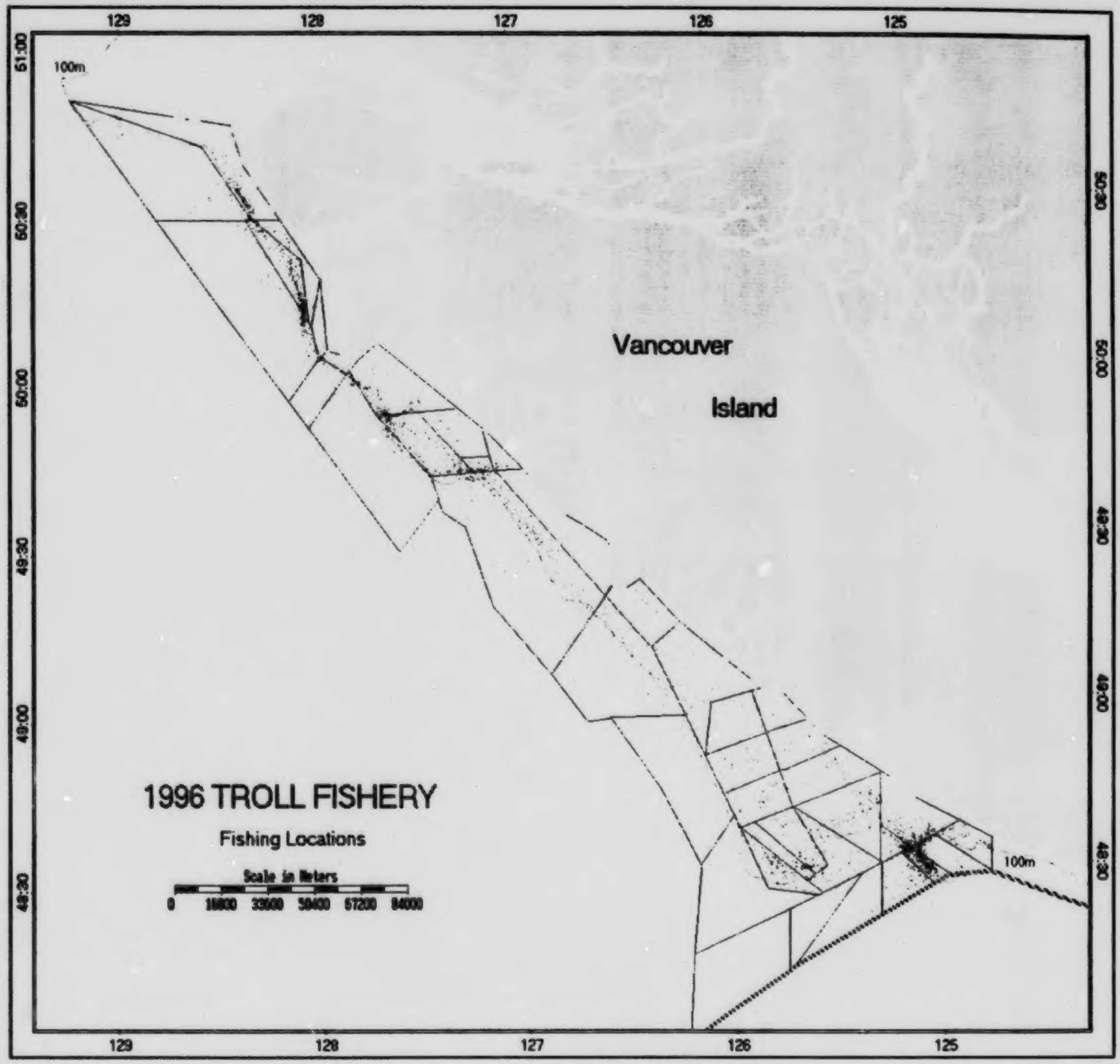


Figure 15. Daily locations of the troll test vessels off WCVI in 1996.

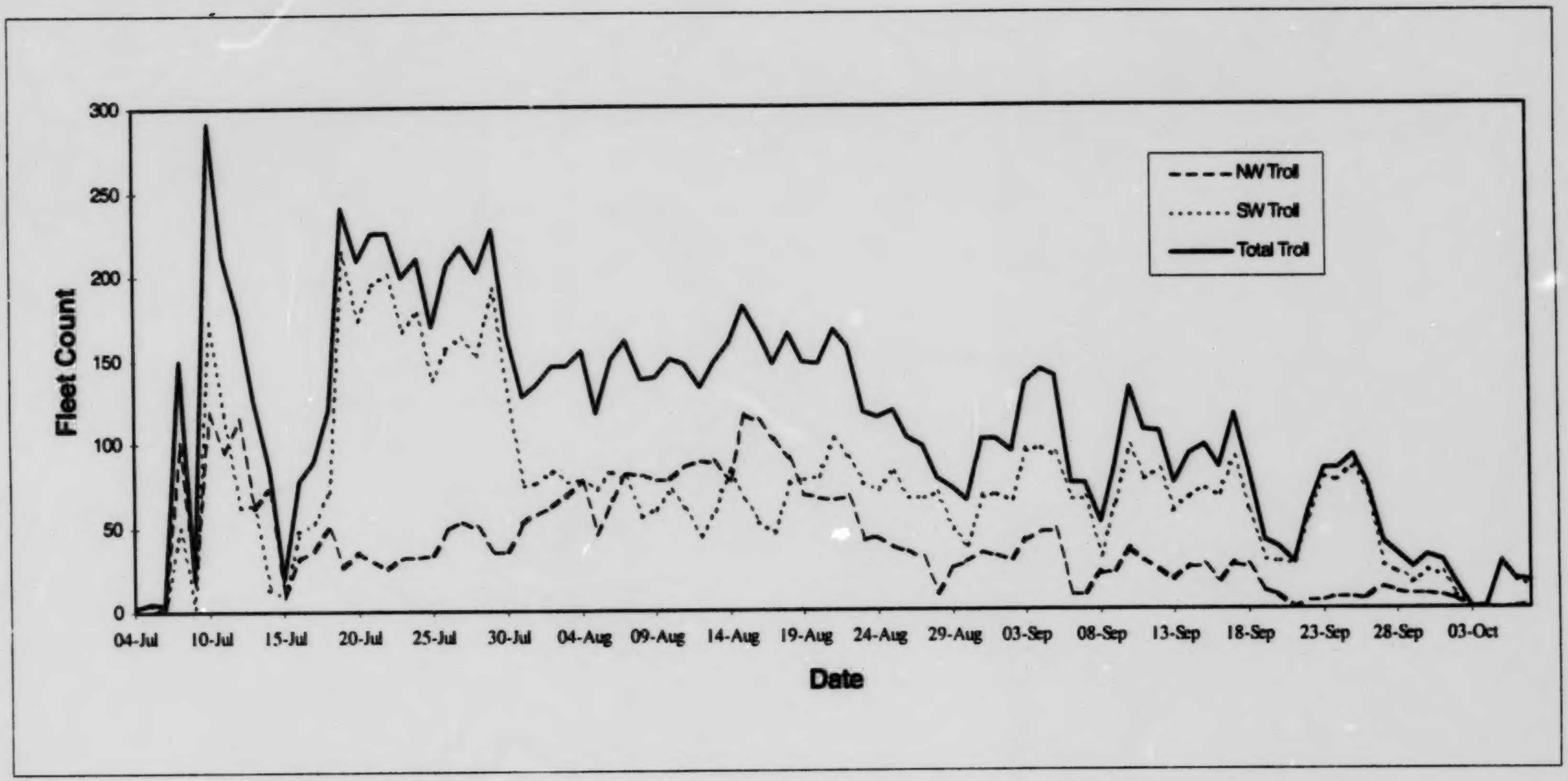


Figure 16. Troll effort (commercial and test fleet count) off the WCVI in 1996.

Table 1. Summary of management provisions and catch for the 1996 Strait of Georgia troll fishery*.

STRAIT OF GEORGIA				
Species	Allocation % of TAC	Management Intent	Actual Catch	
			Pieces	% of TAC
CHINOOK	No directed fishery	Non-retention Non-possession	0	N/A
COHO	No directed fishery	Non-retention	0	N/A
PINK	No TAC identified at outset of season	No commercial catch anticipated	11,204	N/A
CHUM	Allocate surplus in fair and equitable manner	Possible directed October fishery	33	N/A
SOCKEYE	No TAC identified at outset of season**	No commercial catch anticipated	36,286	N/A

* No allocation plan was developed prior to the 1996 troll season due to the poor expectations for run sizes. The CFIC recommended that DFO manage the 1996 commercial salmon fishery to maximize the commercial harvest of the available surplus by commercial gear type and to be as fair and equitable as possible in allocating available surpluses between the three gear types.

** No preseason goals were provided by Canada for allocating commercial catch among gear types (pp. 17 Pacific Salmon Commission 12th Annual Report, 1996/97)

Table 2 Summary of management actions for the 1996 Strait of Georgia troll fishery.

PERIOD	MANAGEMENT ACTIONS			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
August 7	Sockeye Pink Chum	Fishery opened 0001H to 2359 H August 7. Fraser Panel Waters opened 0001 H August 7 to 2359 H August 8.	Fishery opened as per fishing plan. A 24 HR extension is proposed if catch rates are slow in Areas 12, 13 and 16. Fishery opened as per fishing plan.	Area 12: S/A's -1,-3 and -4. Area 13: S/A's -7, -8, -9 and -27 to -32. Area 16: S/A's -21 and a portion of -19 Fraser Panel Waters: . Area 18: S/A -4 Non-retention and non-possession of Chinook and Coho in all areas of Salmon Area H
August 8 to August 15	Sockeye Pink Chum	Extend Fishery opened at 0001 H August 7 to 2359 H August 8. Fraser Panel Waters fishery closed as scheduled at 2359 August 8	Fishery extended to 2359 H August 8 as prescribed in August 5 notice due to slow catch rates in Areas 12, 13 and 16.	Areas open as above. Non-retention and non-possession of Chinook and Coho in all areas of Salmon Area H.
August 16	Sockeye Pink Chum	Fishery opened 0001 H to 2359 H August 16 Fraser Panel Waters Fishery opened 0001 H to 2359 August 16	Fishery opened to optimize harvest of Fraser River Sockeye.	Area 12: S/A's -1, -3, -4 Area 13: S/A's -7 to -9 and -27 to -32 Area 16: S/A -21 and a portion of -19 Fraser Panel Waters: Area 18: S/A -4 Non-retention and non-possession of Chinook and Coho in all areas of Salmon Area H
August 17 to September 25	Sockeye Pink Chum	In areas currently open, the fishery is extended 24 Hours to 2359 H August 17	Fishery extended 24 Hours due to slow catch rates	Areas open as above. Non-retention and non-possession of Chinook and Coho in all areas of Salmon Area H.
September 26 to November 7	Chum	Postpone September 30 planned Fall Chum Fishery until further notice. Conduct Test Fisheries	Reduce impact on lower than expected returns (based on test fishing results)	All areas closed until further notice.
November 8 to November 14	CLOSED	Areas 12 and 13 Closed for the balance of the season	Reduce impact on lower than expected run size (as indicated by test fishing)	NONE

Table 2. Summary of management actions for the 1996 Strait of Georgia troll fishery (cont'd)

PERIOD	MANAGEMENT ACTIONS			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
November 15 to November 28	CLOSED	Areas 16 and 17 Closed for the balance of the season	Reduce impact on low run sizes.	NONE
November 29	CLOSED	Areas 14 and 18 Closed for the balance of the season	Reduce impact on low run sizes.	NONE

Table 3 Catch and effort by Statistical Area for the 1996 Strait of Georgia troll fishery.

Statistical	Species					Boat
Area	Sockeye	Coho	Pink	Chum	Chinook	Days
13	27,761	0	9,460	31	0	145
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	225	0	0	0	0	5
17	0	0	0	0	0	0
18	5,094	0	2	0	0	92
29	506	0	0	0	0	12
Total	33,586	0	9,462	31	0	254

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 4 Catch by species and year for the Strait of Georgia troll fishery, 1981-1996.

	Species				
Year	Sockeye	Coho	Pink	Chum	Chinook
1981	35,599	63,545	171,254	595	70,625
1982	207,905	115,603	1,864	711	53,109
1983	138,231	57,935	155,331	899	39,376
1984	120,976	80,416	2,372	96	88,158
1985	131,772	191,188	346,138	2,264	55,562
1986	280,923	178,330	3,512	2,160	41,050
1987	95,249	217,538	144,894	588	38,695
1988	90,741	256,480	11,267	20,085	19,611
1989	218,017	73,306	271,900	8,893	28,474
1990	451,075	163,202	66,261	15,892	34,394
1991	203,180	11,583	315,087	52,353	32,230
1992	70,446	137,289	22,434	17,892	37,250
1993	285,835	275,953	285,168	9,321	33,356
1994	548,759	50,754	7,998	19,733	12,988
1995	8,872	15	89,915	36,820	3
1996	33,586	0	9,462	31	0

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 5 Weekly catch and days fished for the 1996 Strait of Georgia troll fishery.

Statistical Week	Sockeye		Coho		Pink		Chum		Chinook		Effort	
	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Boat Days	Cumul. Effort
8/1	28,597	28,597	0	0	8,375	8,375	21	21	0	0	141	141
8/2	2,059	30,656	0	0	255	8,630	2	23	0	0	44	185
8/3	1,519	32,175	0	0	832	9,462	8	31	0	0	53	238
8/4	488	32,663	0	0	0	9,462	0	31	0	0	6	244
9/1	923	33,586	0	0	0	9,462	0	31	0	0	10	254
9/2	0	33,586	0	0	0	9,462	0	31	0	0	0	254
9/3	0	33,586	0	0	0	9,462	0	31	0	0	0	254
Total	33,586		0		9,462		31		0		254	

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 6 Summary of management provisions and catch for the 1996 West Coast Vancouver Island troll fishery*.

WEST COAST VANCOUVER ISLAND				
Species	Allocation % of TAC	Management Intent	Actual Catch	
			Pieces	% of TAC
CHINOOK	No directed fishery	Non-retention Non-possession	0	N/A
COHO	No TAC identified at outset of season	1.1M to 1.4 M pieces	773,620	N/A
PINK	No TAC identified at outset of season	No commercial catch anticipated	14,172	N/A
CHUM	No TAC identified at outset of season	Possible directed October fishery	2,989	N/A
SOCKEYE	No TAC identified at outset of season **	Non-retention Non-possession	805	N/A

* No allocation plan was developed prior to the 1996 troll season due to the poor expectations for run sizes. The CFIC recommended that DFO manage the 1996 commercial salmon fishery to maximize the commercial harvest of the available surplus by commercial gear type and to be as fair and equitable as possible in allocating available surpluses between the three gear types.

** No preseason goals were provided by Canada for allocating commercial catch among gear types (pp. 17 Pacific Salmon Commission 12t^{h} Annual Report, 1996/97). Non-retention of sockeye was lifted August 4 to October 7.

Table 7 Summary of management actions for the 1996 West Coast Vancouver Island troll fishery.

PERIOD	MANAGEMENT ACTIONS			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
July 8 to July 18	Coho Pink Chum	Fishery opened 0001H July 8; seven days a week, with Conservation Areas F1, G, H and S closed. Chinook and Sockeye non-retention and non-possession in effect in all areas.	Area G Troll Fishing plan developed with fishers and processors to provide for a directed coho fishing opportunity. The overriding priority for this fishery is to provide a corridor of maximum protection to returning WCVI Chinook stocks, while still maximizing benefits from the Coho fishery. Note: All Area G fishers and processors have recommended a voluntary barbless hook restriction for 1996. Fishers are requested to comply with this recommendation.	Outside Surfline: Area 121: in Conservation area F2 only Area 123: excluding Conservation areas A,B,C,D,H,I,J,K and L Area 124: excluding Conservation areas D,E,K,L and specified areas Areas 125 and 126: excluding specified areas Area 127: excluding specified areas Conservation Areas: F2. Inside Surfline: All areas closed
July 19 to July 25	Coho Pink Chum	Conservation Areas I and a portion of B opened to trolling, 0001H July 19. Chinook and Sockeye non-retention and non- possession in effect in all areas.	Additional fishing areas opened to provide more Coho fishing opportunities in areas where chinook encounter rates have been minimal.	Outside Surfline: Area 121: in Conservation area F2 only Area 123: excluding Conservation areas A,C,D,H,,J,K, L and a portion of B Area 124: excluding Conservation areas D,E,K,and L Areas 125 and 126: excluding specified areas Area 127: excluding specified areas Conservation Areas: F2, I and a portion of B. Inside Surfline: Area 27: S/A -2 (outside Winter Harbour Area) Portion of S/A -4 (Brooks Bay) Portion of S/A -6 (Brooks Bay)
July 26 to July 31	Coho Pink Chum	Conservation Area B (total) and the outside portion of Conservation area H opened to trolling, 0001H July 26. Chinook and Sockeye non-retention and non-possession in effect in all areas.	Additional fishing areas opened to provide more Coho fishing opportunities in areas where chinook encounter rates have been minimal.	Outside Surfline: As above, noting changes in Conservation areas B and H. Area 125: Extend closed area to include waters inside Esperanza Box Boundary Conservation Areas: F2, I, B and a portion of H Inside Surfline: As Above:

Table 7. Summary of management actions for the 1996 West Coast Vancouver Island troll fishery (cont'd).

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
August 1 To August 4	Coho Pink Chum	Area 27 closed to trolling 0001H August 1. Chinook and Sockeye non-retention and non-possession in effect in all areas.	Areas closed for the protection of local stocks.	Outside Surfline: As above. Conservation Areas: As above. Inside Surfline: Area 27: S/A -2, -4, and -6 closed
August 5 To August 13	Coho Pink Chum	Area 127: Ribbon Boundary above Topknot Point removed. Chinook and Sockeye non-retention and non-possession in effect in all areas.	Additional fishing areas opened to provide more Coho fishing opportunities in areas where chinook encounter rates have been minimal.	Outside Surfline: As above, except for: Area 127: Removal of Ribbon Boundary above Topknot Point Conservation Areas: As above. Inside Surfline: Area 27: S/A -2, -4, and -6 remain closed
August 14 To August 22	Coho Pink Chum Sockeye	Sockeye retention opened 0001H August 14 to 2359 August 16 in all areas currently open for Coho, Pink and Chum. Non-retention and non-possession of Chinook remains in effect in all areas.	Sockeye fishing commenced according to management plan. Ceiling is 30,000 sockeye.	Outside Surfline: As above. Conservation Areas: As above. Inside Surfline: Area 27: S/A -2, -4, and -6 remain closed

Table 7. Summary of management actions for the 1996 West Coast Vancouver Island troll fishery (cont'd).

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
August 23 To September 12	Coho Pink Chum Sockeye	Fishery opened in a portion of Conservation Area A; Ribbon Boundary in Area 125 extended; Box Boundary closure opened in Area 126; change in Ribbon Boundary in Area 127 0001 H August 23. Non-retention and non-possession of Chinook remains in effect in all areas.	Additional fishing areas opened to provide more Sockeye fishing opportunities in areas where chinook encounter rates have been minimal. Chinook conservation overriding priority for this fishery is to provide a corridor of maximum protection to returning WCVI Chinook stocks, while still maximizing benefits from the Coho, Sockeye, Chum, and Pink fisheries. (If Chinook encounter rates are high in specific areas, boundary adjustments to be made on short notice)	Outside Surfline: Area 123: Portion of Conservation Area A opened. Area 125: Ribbon Boundary extended from Ferrer Point to Tatchu Point. Area 126: Box Boundary closure opened. Area 127: Ribbon Boundary changed between Solander Island to Lawn Point. Conservation Areas: As above; including a portion of Area A opened. Inside Surfline: Area 27: S/A -2, -4, and -6 remain closed
September 13 To September 20	Coho Pink Chum Sockeye	Fishery opened in Conservation Areas A, C, D, E, J, K and L 0001 H, September 13. Ribbon Boundaries in Areas 124 through 127 removed. Non-retention and non- possession of Chinook remains in effect in all areas.	Conservation areas opened as Coho and Sockeye catches remain well below ceilings. (Conservation Areas G, F1 and the inside portion of H remain closed due to unacceptable levels of Chinook and Coho shakers).	Outside Surfline: As above; remaining Ribbon Boundaries opened.. Conservation Areas: A, B, C, D, E, F2, H, I, J, K, L, and a portion of H Inside Surfline: All Areas remain closed.
September 21 To October 7	Coho Pink Chum Sockeye	0001 H September 21, outer portion of Conservation Area F1 opened. Non-retention and non- possession of Chinook remains in effect in all areas.	Fishery opened as indications of Chinook and Coho shaker levels reduced.	Outside Surfline: As above. Conservation Areas: A, B, C, D, E, F2, H, I, J, K, L, a portion of H and a portion of F1. Inside Surfline: All Areas remain closed.

Table 7. Summary of management actions for the 1996 West Coast Vancouver Island troll fishery (cont'd).

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	SPECIES OPEN	ACTION	PURPOSE	
October 7	CLOSED	Fishery closed 2359H October 7.	Fishery closed in accordance with fishing plan, regarding chum harvest guidelines and conservation concerns	NONE
October 19 to October 20	Chum	Troll fishery opened 0800 H October 19 to 1800 H October 20 in Areas 21 and 121.	Nitinat Chum escapement sufficient to open fishery. A gillnet opening will take place at the same time.	Area 20: S/A -1, portion as outlined Area 21: Area 121: S/A -1 and -2, portions as outlined

Table 8. Catch and effort by Statistical Area for the 1996 West Coast Vancouver Island troll fishery.

Statistical	Species					Boat
Area	Sockeye	Coho	Pink	Chum	Chinook	Days
21/121	103	66,701	60	327	0	870
23/123	440	376,605	433	522	0	5,294
24/124	68	111,921	276	1,937	0	2,153
25/125	14	51,779	167	259	0	982
26/126	72	85,664	454	575	0	1,582
27/127	1132	99,906	12,852	972	0	2,000
Total	809	792,576	14,242	4,592	0	12,881

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 9. Catch by species and year for the West Coast Vancouver Island troll fishery, 1981-1996.

	Species				
Year	Sockeye	Coho	Pink	Chum	Chinook
1981	44,433	1,385,323	2,753,954	9,373	397,518
1982	2,190,455	1,777,436	36,680	73,426	543,783
1983	36,604	2,167,438	1,091,352	8,978	385,367
1984	41,797	2,172,166	65,971	12,930	460,057
1985	1,051,373	1,389,055	1,817,907	221,852	354,068
1986	1,780,585	2,156,833	169,669	264,249	342,063
1987	475,129	1,821,022	562,504	15,811	378,931
1988	70,206	1,595,801	497,619	80,445	408,724
1989	1,090,914	1,952,009	1,740,473	23,296	203,695
1990	1,921,444	1,863,608	402,906	8,514	297,974
1991	1,400,052	1,889,946	1,372,137	12,980	202,919
1992	182,834	1,671,822	121,590	45,412	346,741
1993	629,443	953,811	450,374	8,371	274,745
1994	353,732	1,254,817	13,433	10,311	145,928
1995	34,111	1,354,003	785,016	30,971	81,278
1996	809	792,576	14,242	4,592	0

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 10. Weekly catch and days fished for the 1996 West Coast Vancouver Island troll fishery.

Statistical Week	Sockeye		Coho		Pink		Chum		Chinook		Effort	
	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Boat Days	Cumul. Effort
7/2	0	0	5,721	5,721	372	372	29	29	0	0	372	372
7/3	0	0	8,465	14,186	693	1,065	25	54	0	0	361	733
7/4	0	0	59,262	73,448	894	1,959	18	72	0	0	790	1,523
7/5	5	5	88,141	161,589	4,479	6,438	58	130	0	0	1,247	2,770
8/1	0	5	91,536	253,125	2,998	9,436	190	320	0	0	1,169	3,939
8/2	303	303	140,335	393,460	3,132	12,568	254	574	0	0	1,828	5,767
8/3	298	606	105,697	499,157	672	13,240	163	737	0	0	1,378	7,145
8/4	83	689	71,786	570,943	129	13,369	136	873	0	0	1,105	8,250
9/1	10	699	65,391	636,334	6	13,375	191	1,064	0	0	893	9,143
9/2	0	699	46,119	385,453	760	14,135	261	1,325	0	0	904	10,047
9/3	105	804	40,343	725,796	37	14,172	217	1,542	0	0	801	10,848
9/4	0	804	29,341	755,137	0	14,172	538	2,080	0	0	818	11,666
10/1	1	805	22,228	777,365	0	14,172	909	2,989	0	0	677	12,343
10/2	4	809	13,935	791,300	70	14,242	1,603	4,592	0	0	475	12,818
10/3	0	809	858	792,158	0	14,242	0	4,592	0	0	41	12,859
10/4	0	809	0	792,158	0	14,242	0	4,592	0	0	0	12,859
10/5	0	809	418	792,576	0	14,242	0	4,592	0	0	22	12,881
Total	809		792,576		14,242		4,592		0		12,881	

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 11. Summary of management provisions and catch for the 1996 Johnstone Strait troll fishery*.

JOHNSTONE STRAIT				
Species	Allocation % of TAC	Management Intent	Actual Catch	
			Pieces	% of TAC
CHINOOK	No directed fishery	Non-retention Non-possession	0	N/A
COHO	No directed fishery	Non-retention Non-possession	0	N/A
PINK	No TAC identified at outset of season	No commercial catch anticipated	11,202	N/A
CHUM	Allocate surplus in fair and equitable manner	Possible directed October fishery	33	N/A
SOCKEYE	No TAC identified at outset of season **	No commercial catch anticipated	30,461	N/A

* No allocation plan was developed prior to the 1996 troll season due to the poor expectations for run sizes. The CFIC recommended that DFO manage the 1996 commercial salmon fishery to maximize the commercial harvest of the available surplus by commercial gear type and to be as fair and equitable as possible in allocating available surpluses between the three gear types.

** No preseason goals were provided by Canada for allocating commercial catch among gear types (pp. 17 Pacific Salmon Commission 12t^{h} Annual Report, 1996/97)

Table 12. Summary of management actions for the 1996 Johnstone Strait troll fishery.

PERIOD	MANAGEMENT ACTIONS				MANAGEMENT AREAS OPEN
	STAT AREA	SPECIES OPEN	ACTION	PURPOSE	
August 7	11	CLOSED	**Area 11 closed for the duration of the season.**	**Provide maximum protection for WCVI Chinook stocks**	NONE
	12	Sockeye Pink Chum	Fishery opened 0001 to 2359 H August 7.	Fishery opened as per fishing plan. A 24 Hour extension is proposed if catch rates are slow in Area 12.	S/A's -1, -3 and -4. Note: non-retention and non-possession of Chinook and Coho in all areas.
	13	Sockeye Pink Chum	Fishery opened 0001 to 2359 H August 7.	Fishery opened as per fishing plan. A 24 Hour extension is proposed if catch rates are slow in Area 13.	S/A's -7 to -9, -27 to -32. Note: non-retention and non-possession of Chinook and Coho in all areas.
August 8 to August 15	12	Sockeye Pink Chum	24 H extension to 2359 H August 8.	Fishery extended to 2359 H August 8 as prescribed in August 5 Notice due to slow catch rates in Area 12.	S/A's -1, -3 to -4. Non-retention and non-possession of Chinook and Coho in effect.
	13	Sockeye Pink Chum	24 H extension to 2359 H August 8.	Fishery extended to 2359 H August 8 as prescribed in August 5 Notice due to slow catch rates in Area 13.	S/A's -7 to -9 and -27 to -32. Non-retention and non-possession of Chinook and Coho in effect.
August 16	12	Sockeye Pink Chum	Fishery opened 0001 to 2359 H August 16.	Fishery opened to optimize harvest of Fraser River Sockeye.	S/A's -1. -3 and -4. (Note: S/A -2 Adams River Box Boundary closed). Non-retention and non-possession of Chinook and Coho in effect in all areas.
	13	Sockeye Pink Chum	Fishery opened 0001 to 2359 H August 16.	Fishery opened to optimize harvest of Fraser River Sockeye.	S/A's -7 to -9 and -27 to -32. Non-retention and non-possession of Chinook and Coho in effect in all areas.
August 17 to August 18	12	Sockeye Pink Chum	Fishery extended 24 H until 2359 H August 17.	Fishery extended due to slow catch rates.	S/A's -1, -3 and -4 (Note 12-2 Adams River Box Boundary is CLOSED).
	13	Sockeye Pink Chum	Fishery extended 24 H until 2359 H August 17.	Fishery extended due to slow catch rates.	Areas open as above. Non-retention and non-possession of Chinook and Coho in all areas.

Table 12. Summary of management actions for the 1996 Johnstone Strait troll fishery (cont'd).

PERIOD	MANAGEMENT ACTIONS				MANAGEMENT AREAS OPEN
	STAT AREA	SPECIES OPEN	ACTION	PURPOSE	
August 19 To Sept. 25	12	CLOSED	Fishery closed pending test fishing results from Johnstone Strait Chum Assessment Fishery	Lower than expected Chum returns.	NONE
	13	CLOSED	Fishery closed pending test fishing results from Johnstone Strait Chum Assessment Fishery	Lower than expected Chum returns.	NONE
Sept. 26 to October 9	12 and 13	CLOSED	Test fishing results announced. Chum fishery scheduled for September 30 postponed. Assessment and test fishing to continue.	Protect returning chum stocks. Low run size observed in test fishing.	NONE
October 10 to 16	12 and 13	CLOSED	Areas 12 and 13 remain closed until further notice. Test fishing will continue.	Concerns for returning chums and low run sizes.	NONE
October 17to 23	12 and 13	CLOSED	Areas 12 and 13 remain closed until further notice. Test fishing will continue.	Concerns for returning chums and low run sizes.	NONE
October 24 to 30	12 and 13	CLOSED	Areas 12 and 13 remain closed until further notice. Test fishing will continue.	Concerns for returning chums and low run sizes.	
October 31 to November 7	12 and 13	CLOSED	Areas 12 and 13 remain closed until further notice. Test fishing will continue.	Concerns for returning chums and low run sizes.	
November 8	12 and 13	CLOSED	Areas 12 and 13 CLOSED for the balance of the season. Clock Work Test fishing is now complete for the year.	The total chum run size under clock work remains estimated at 2.7 million. An escapement of 3.0 million is	

Table 13. Catch by species and year for the 1996 Johnstone Strait troll fishery, 1981-1996.

Year	Species				
	Sockeye	Coho	Pink	Chum	Chinook
1981	10,494	26,375	212,661	968	7,373
1982	21,601	31,564	6,038	2,553	5,979
1983	30,840	63,284	558,801	3,151	10,957
1984	2,793	32,863	2,076	510	8,445
1985	17,375	8,391	119,963	2,502	3,562
1986	8,016	34,583	2,596	1,392	3,921
1987	3,658	5,822	8,359	207	1,780
1988	129	14,824	15,787	236	1,566
1989	91,464	14,142	462,887	2,426	1,825
1990	20,279	20,749	255,017	383	2,298
1991	23,015	6,169	88,206	332	1,228
1992	70,135	23,351	72,163	798	2,721
1993	353,894	21,319	610,489	5,661	4,186
1994	362,355	15,749	76,929	1,439	2,217
1995	23,400	149	379,950	17,428	4
1996	2,700	1,255	1,742	2	0

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 14. Weekly catch and days fished for the 1996 Johnstone Strait troll fishery.

Statistical Week	Sockeye		Coho		Pink		Chum		Chinook		Effort	
	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Boat Days	Cumul. Effort
8/1	1,996	1,996	0	0	1,493	1,493	0	0	0	0	14	14
8/2	361	2,357	0	0	20	1,513	2	2	0	0	10	24
8/3	343	2,700	0	0	229	1,742	0	2	0	0	18	42
8/4	0	2,700	0	0	0	1,742	0	2	0	0	0	42
9/1	0	2,700	0	0	0	1,742	0	2	0	0	0	42
9/2	0	2,700	0	0	0	1,742	0	2	0	0	0	42
9/3	0	2,700	1,255	1,255	0	1,742	0	2	0	0	8	50
Total	2,700		1,255		1,742		2		0		50	

Note: Catch and effort information is from CDSS records accessed on April 30, 1998. Johnstone Strait catch information includes Statistical Areas 11/111 and 12.

Table 15. Summary of management provisions and catch for the 1996 North Coast troll fishery*.

NORTH COAST				
Species	Allocation % of TAC	Management Intent	Actual Catch	
			Pieces	% of TAC
CHINOOK	No directed fishery	Non-retention Non-possession	0	N/A
COHO	1995 conservation actions in effect	In-season monitoring no preseason allocation	434,528	N/A
PINK	No TAC identified no projected surplus	No ceiling on Area 1 pinks	963,295	N/A
CHUM	No TAC identified no projected surplus	No restrictions	41,721	N/A
SOCKEYE	For outside troll, 5% of Areas 1,3-5 all gear, non-Fraser sockeye. No fishery on southern bound stocks**	In season direction via catch monitoring	33,868	N/A

* No allocation plan was developed prior to the 1996 troll season due to the poor expectations for run sizes. The CFIC recommended that DFO manage the 1996 commercial salmon fishery to maximize the commercial harvest of the available surplus by commercial gear type and to be as fair and equitable as possible in allocating available surpluses between the three gear types.

** No preseason goals were provided by Canada for allocating commercial catch among gear types (pp. 17 Pacific Salmon Commission 12th Annual Report, 1996/97)

Table 16. Summary of management actions for the 1996 North Coast troll fishery.

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
July 8 to July 16	Sockeye Pink Chum Coho	Fishery opened at 0001 H July 8. Non-possession and non-retention of Chinook in effect.	Fishery opened as per North Coast Troll Fishing Plan. **Priority** for this fishery **is to provide maximum protection for returning WCVI Chinook stocks**. This plan also provides allowance for **expanded opportunities for Skeena River Sockeye**. (Note: DFO endorsed the recommendation from the Northern Trollers Association that **Barbless Hooks** be used in 1996. Trollers were requested to crimp the barbs on their hooks to reduce shaker mortalities). Dundas Island Management (Area 3-1): An **effort limitation guideline** of 50 boats per day or 350 boats per week has been established **for** sub-area 3-1. If this effort guideline is compromised, non-retention of Coho will be implemented.	Outside Surfline: Area 101: S/A's -4, -5, 8, -9, -10, portions of -3, -6 and -7 (outside Chinook red-line boundary) Area 102: (Note: S/A -1 open to trolling for Sockeye) Area 103: Portion (will open to Sockeye, Pink and Chum in conjunction with Coho closure in S/A 3-1) Area 104: Portions of S/A's -1 and -3 Area 105 to Area 110 Inside Surfline: Area 1: S/A's -5, -3 (portion outside Chinook red-line boundary) Area 2: S/A's -1 to –19 (open to Sockeye trolling during net fishing times and areas) Area 3: S/A -1 (portion).... (as above) (when Coho closed, open to Sockeye, Pink and Chum) Area 4: (closed to trolling during net fishing times and areas) Area 5: Area 6 to Area 10: (open to trolling for sockeye during net fishing times and areas. Note: Areas 7 to 10 open to Sockeye trolling only during net fishing times and areas)

Table 16. Summary of management actions for the 1996 North Coast troll fishery (cont'd).

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
July 17 to July 18	Sockeye Pink Chum Coho	Fishery opened for Sockeye, Pink and Chum at 0001 H July 17.	Increase harvest opportunities for Skeena River Sockeye	As above, including: Outside Surfline: Area 103: portion (non-retention and non-possession of Chinook and Coho in effect) Area 104: S/A's -1, -2 portions, -3 portions (non-retention and non-Possession of Chinook and Coho in effect) Inside Surfline: Area 3: S/A -1 portion (non-retention and non-possession of Chinook and Coho in effect) Area 4: S/A -1 portion (non-retention and non-possession of Chinook and Coho in effect)
July 19 to July 31	Sockeye Pink Chum Coho	Fishery opened (expanded) for Sockeye at 2359 H, July 19 as per the 1996 Northern (Area F)Troll Plan	Increase harvest opportunities for Skeena River Sockeye	As above, including: Outside Surfline: Area 101: seaward of Chinook redline boundary (non-retention and non-possession of Chinook and Coho in effect) Inside Surfline: Area 1: seaward of Chinook redline boundary (non-retention and non-possession of Chinook and Coho in effect)
August 1 to August 17	Sockeye Pink Chum Coho	Fishery opened (expanded) 0001 H August 1, as per the 1996 Northern (Area F)Troll Plan for Coho, Pink and Chum. Area 4 **Troll Assessment Fishery opens** August 1, utilizing ten (10) Trollers (to August 5) to determine further Troll opportunities in Area 4.	Expand fishing opportunities while **providing maximum protection for returning WCVI Chinook stocks.** Areas 7 to 10 open to Sockeye retention only during net fishing times and areas. Trollers advised that they must offload Sockeye catches if contemplating trolling in those areas where possession of Sockeye is prohibited.	As above, including: Inside Surfline: Area 6: S/A's -9, -11, -13, -17 and -10 (portion) Area 7: S/A's -1, -2, -18, -19, -20, -23, -25, -26, -27, -31, -32 Area 8: S/A –1 Area 9: S/A -1 (portion) Area 10: S/A's -1 (portion) and -2 (portion)

Table 16. Summary of management actions for the 1996 North Coast troll fishery (cont'd).

PERIOD	MANAGEMENT ACTION			MANAGEMENT AREAS OPEN
	Species Open	Action	Purpose	
August 18 to August 29	Sockeye Pink Chum Coho	Fishery opened 0001 H August 18	**Expanded fishing opportunities for Sockeye and Coho**. Positive indications of Coho abundance in the Dixon Entrance and Hecate Strait approaches to the Skeena River with less than expected fishing effort in all currently open troll areas.	As above, including Outside Surfline: Area 103: portion Area 104: S/A's -1 (portion), -2, -3 (portion) Inside Surfline: Area 3: S/A -1 (portion)
August 30 to September 1	Sockeye Pink Chum Coho	Fishery opened 0001 H August 30	Increase fishing opportunities for Sockeye, Coho, Pink and Chum.	As above, including Inside Surfline: Area 3: S/A's -2, -3, -4
September 2 to September 14	Sockeye Pink Chum Coho	Fishery opened 0001 H September 2 for Coho, Pink and Chum in selected Areas.	Increase fishing opportunities for Coho, Pink and Chum.	As above, including Inside Surfline: Area 2: S/A's -42 (portion), -43 to -47, -49 (portion), -51 to -55, -60
September 15 to September 22	Sockeye Pink Chum Coho	Fishery partially closed 2359 H September 15 in Area 3: S/A's -2, -3 and -4.	Fishery closed in specified areas due to **less than desired escapements** in coastal streams; **concern for later timed coho stocks**	As above, **minus**: Inside Surfline: Area 3: S/A's -2, -3, -4. (Now Closed for Season)
September 23	CLOSED	Fishery closed for season 2359 H September 23.	Close Salmon Area F Troll Fishery for season. Below average Coho abundance of later timed Coho stocks observed in Area 4 Commercial Gillnet catch.	ALL AREAS CLOSED

Table 17. Catch and effort by Statistical Area for the 1996 North Coast troll fishery.

Statistical Area	Species					Boat Days
	Sockeye	Coho	Pink	Chum	Chinook	
1	18,675	252,436	732,349	23,010	0	5,326
2E	391	17,481	5,846	515	0	467
2W	0	1,484	11	1,063	0	42
3	11,086	99,599	171,316	14,244	0	4,118
4	3,170	26,447	29,017	1,457	0	471
5	398	27,746	11,916	546	0	793
6	157	9,061	7,083	843	0	233
7	0	246	28	11	0	37
8	3	945	6,282	94	0	56
9	0	0	0	0	0	0
10	2	689	225	23	0	63
11	Closed	Closed	Closed	Closed	Closed	Closed
Total	33,882	436,134	964,073	41,806	0	11,605

Note: Catch and effort information is from CDSS records accessed on April 30, 1998.

Table 18. Catch by species and year for the North Coast troll fishery.

Year	Species				
	Sockeye	Coho	Pink	Chum	Chinook
1981	35,471	625,428	1,276,938	16,059	169,240
1982	67,301	565,945	148,025	11,247	190,834
1983	89,808	1,143,078	1,176,336	26,265	185,146
1984	32,287	847,699	1,449,415	74,160	233,235
1985	106,538	654,608	1,624,494	231,830	204,644
1986	121,624	1,645,679	743,180	205,126	201,440
1987	168,747	801,025	2,656,969	69,677	238,696
1988	82,505	515,413	2,871,355	175,162	181,648
1989	437,615	679,096	2,512,360	83,428	223,957
1990	653,945	1,214,272	2,001,821	42,944	178,800
1991	162,637	1,081,590	2,121,639	49,670	220,604
1992	79,691	727,314	1,200,937	73,429	181,529
1993	799,257	378,482	1,521,556	263,101	182,389
1994	1,215,656	781,930	346,147	65,645	182,382
1995	103,273	315,740	1,934,781	186,061	61,539
1996	33,882	436,134	964,073	41,806	0

Notes: Catch and effort information is from CDSS records accessed on April 30, 1998. North Coast catch and effort information is from Statistical Areas 1-11.

Table 19. Weekly catch and days fished for the 1996 North Coast troll fishery.

Statistical Week	Sockeye		Coho		Pink		Chum		Chinook		Effort	
	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Catch	Cumul. Catch	Boat Days	Cumul. Effort
7/2	182	182	4,359	4,359	2,133	2,133	408	408	0	0	75	75
7/3	2,801	2,801	36,104	40,463	76,404	78,537	5,394	5,802	0	0	623	698
7/4	10,149	13,132	64,277	104,740	97,492	176,029	4,873	10,675	0	0	938	1,636
7/5	11,457	24,589	55,836	160,576	149,674	325,703	4,860	15,535	0	0	1,218	2,854
8/1	5,278	29,867	49,082	209,658	138,396	464,099	4,934	20,469	0	0	1,002	3,856
8/2	2,070	31,937	60,192	269,850	190,688	654,787	5,156	25,625	0	0	1,162	5,018
8/3	804	32,741	42,234	312,084	98,380	753,167	2,706	28,331	0	0	1,137	6,155
8/4	905	33,646	43,932	356,016	98,715	851,882	3,559	31,890	0	0	1,261	7,416
9/1	106	33,753	27,771	383,787	63,349	915,231	3,686	35,576	0	0	1,108	8,524
9/2	68	33,821	21,456	405,243	15,611	930,842	2,989	38,565	0	0	1,065	9,589
9/3	33	33,854	16,785	422,028	12,927	943,769	1,817	40,382	0	0	813	10,402
9/4	24	33,878	11,072	433,100	2,361	946,130	925	41,307	0	0	908	11,310
10/1	3	33,881	1,886	434,986	17,598	963,728	441	41,748	0		140	11,450
10/2	0	33,881	211	435,197	0	963,728	14	41,762			40	11,490
10/3	1	33.882	683	435,880	227	963,955	40	41,802			87	11,577
10/4			254	436,134	118	964,073	4	41,806			28	11,605
Total	33,882		436,134		964,073		41,806		0		11,605	

Notes: Catch and effort information is from CDSS records accessed on April 30, 1998.
North Coast catch and effort information is from Statistical Areas 1-11.

APPENDIX 1

INFORMATION BULLETIN:

1996 SALMON TROLL FISHING PLANS

AREA H

STRAIT OF GEORGIA

AND

JOHNSTONE STRAIT

PACIFIC REGION

1996 SALMON TROLL MANAGEMENT PLAN

AREA H

STRAIT OF GEORGIA AND JOHNSTONE STRAIT

This Salmon Troll Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the regulations, the regulations are the final authority.

A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

Fisheries and Oceans Canada　Pêches et Océans Canada

Canada

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1. INTRODUCTION

This fishing plan has been developed by DFO using pre-season expectations. Specific details of individual fisheries will be developed in consultation with Area H fishers and processors.

Catches are limited by domestic allocations and stock abundance. At the time of publishing this plan, there was no Pacific Salmon Treaty fishing agreement in place for 1996. In the event of an agreement, the fishing plan will be adjusted to reflect the fishing agreements. Notification of these adjustments will be made by a Notice to Industry.

2. MANAGEMENT OBJECTIVES

The troll fishing plan for 1996 was developed with consideration of the following objectives:

2.1. Manage fisheries using a risk aversion management strategy that ensures management objectives and escapement goals are met.

2.2. Meet Aboriginal fisheries obligations.

2.3. Contribute to the Lower Strait of Georgia chinook conservation program and the Strait of Georgia Coho Rebuilding Strategy.

2.4. Maintain manageability and enforceability of the plan.

3. AREA H INSIDE TROLL HIGHLIGHTS

3.1. The first troll opening opportunity may not be available until late September for chums due to forecast low returns of Fraser River sockeye and Mainland Inlet pink, however, all fishing options will remain open if stocks warrant a fishery.

3.2. There will be no chinook fishery in 1996 due to continued conservation concerns.

3.3. There will be coho **non-retention** and **non-possession** during all fisheries in 1996.

3.4. There are no size limit changes in 1996.

3.5. Given the limitations on sockeye, coho and chinook harvests in 1996, the requirement for scheduled weekly B.C. Tel telephone conferences is not warranted. Proposed management actions and catch information will be provided by the regular Notices to Industry.

3.6. In the event a B.C. Tel conference call is held, advance notice of a call will be broadcast to the fleet by current communications network, i.e., DFO patrol vessels, Coast Guard Weather channels and the 24 hour troll information numbers.

3.7. All times referred to in this plan are local times.

3.8. Recorded phone services for 24 hour troll information is provided at the following locations:

Vancouver	**666-1506**
Nanaimo	**754-0281**

4. STRAIT OF GEORGIA AND JOHNSTONE STRAIT TROLL FISHING PLAN

4.1. Assumptions Regarding Abundance

4.1.1. SOCKEYE

A return of 1.56 million Fraser River sockeye is forecast with no commercial catch expected. The diversion rate through Johnstone Strait is forecast (early June) to be 51%. Next diversion rate forecast date is mid-July.

4.1.2. COHO

Coho abundance is expected to be extremely low in the Strait of Georgia. It is assumed that the Strait of Georgia coho have migrated to the West Coast of Vancouver Island.

4.1.3. PINK

This is an off-cycle year for southern bound (Fraser River) pink.

The Study Area (Johnstone Strait and Strait of Georgia but not including Fraser River) pink salmon escapement in 1994 was 1.28 million. The expected total return is about 1.79 million. This is less than the escapement requirement of 3.1 million.

Mainland Inlets (Area 12) pinks are expected to be low in abundance in 1996. While no surpluses are expected, there may be a small surplus to the Kakweiken River system in the order of 250,000 pink. In season monitoring programs will be in place for the Knight/Bond Inlet areas.

4.1.4. CHUM

Study Area (Johnstone Strait, Strait of Georgia and Fraser River) chum total run size is forecast to be 4.2 million. Fishers should be aware that ocean survival conditions have been poor and that this forecast may be optimistic.

4.1.5. CHINOOK

Abundance is expected to be low in 1996.

4.2. Allocations and Limitations

There is currently no 1996 allocation plan. Given that the expectations are so poor in 1996, Commercial Fishing Industry Council (CFIC) has recommended that DFO manage the 1996 commercial salmon fishery using the following prioritized allocation criteria:

1. Maximize the commercial harvest of the available surplus by commercial gear type.
2. Do not use the 1992 allocation plan for 1996.
3. Be fair and equitable as possible in allocating the available resources between the three gear sectors within the constraints of points 1 and 2 above.
4. The 1996 season should be considered as anomalous and, therefore, the 1996 Domestic Allocation Plan should not set any precedents for the Long Term Allocation Plan.

4.2.1. SOCKEYE

No commercial TAC of Fraser River sockeye is forecast. If, in-season the estimated run size exceeds forecast levels and a commercial TAC is identified, allocation levels and fishing opportunities will be determined.

4.2.2. COHO

There will be coho **non-retention** and **non-possession** during all fisheries in 1996.

4.2.3. STUDY AREA AND MAINLAND INLET PINK

There is currently no expected surplus. If in-season, run size forecasts increase and a commercial TAC is identified, allocation levels and fishing opportunities will be determined.

4.2.4. CHUM

Due to generally poor salmon returns expected for 1996, CFIC has recommended that DFO allocate the fish in the most fair and equitable manner as possible. This could result in fishing opportunities beyond traditional levels for Area H licence holders.

4.2.5. CHINOOK

Due to conservation concerns for the Strait of Georgia Chinook there will be no directed chinook fishery in 1996. Chinook non-retention and non-possession will be in effect during all fisheries in 1996.

4.3. Plan Details

This troll fishing plan is for Statistical Areas 12 to 19, 28 and 29. The Area H troll fishery will take place between the end of July to mid-October. If all allocations and ceilings are reached prior to mid-October, or severe conservation problems develop, this fishery may close earlier than anticipated.

4.3.1. FRASER RIVER SOCKEYE and PINK FISHERIES

At the time of publishing this plan, there was no Pacific Salmon Treaty fishing agreement for 1996. In the event of an agreement, the fishing plan will be adjusted to reflect the fishing agreements. Notification of these adjustments will be made by a Notice to Industry.

The Fraser River sockeye and Mainland Inlet pinks forecasts for 1996 are very poor with no expected commercial fisheries. In order to address unexpected surpluses a meeting will be held with Licensed Area H fishers during July to draft a contingency plan to harvest any surplus stocks. The results of this meeting will be announced in a Notice to Industry.

4.3.2. COHO AND CHINOOK FISHERIES

In 1996 there will be **non-possession** and **non-retention** of coho and chinook in effect during all fisheries.

There will be no directed chinook or coho fisheries in 1996.

4.3.3. CHUM FISHERIES

In mid-September a meeting will be held with Area H stakeholders to discuss a chum fishing plan.

A directed chum fishery (2 to 3 days) in Subareas 13-7 to 13-10 and 13-27 to 13-32 (area above Seymour Narrows) is anticipated for the last week of September. If allocation/stocks permit, weekly fisheries in the first 2 weeks of October may be considered.

5. ENFORCEMENT

OBSERVE, RECORD AND REPORT:

FISHERIES VIOLATIONS	1-800-465-4336
WILDLIFE AND POLLUTION VIOLATIONS	1-800-663-9453

Users of the resource have a responsibility to report violators. Any suspected or actual violations can be quickly and discretely passed on to the appropriate Enforcement Officer by telephoning the toll-free Observe, Record and Report (ORR) number for reporting fisheries, wildlife and pollution violations. Confidentiality is assured.

APPENDIX 2

INFORMATION BULLETIN:

1996 SALMON TROLL FISHING PLANS

AREA G

WEST COAST VANCOUVER ISLAND

PACIFIC REGION

1996 SALMON TROLL MANAGEMENT PLAN

AREA G

WEST COAST VANCOUVER ISLAND

This 1996 Salmon Troll Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the regulations, the regulations are the final authority.
A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

Fisheries and Oceans Canada   Pêches et Océans Canada

Canada

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1. INTRODUCTION

This fishing plan has been developed through a series of meetings with Area G fishers and processors and included representation from the Pacific Trollers Association, the United Fishermen and Allied Workers Union and the Nuu-chah-nulth Tribal Council.

Catches are limited by domestic allocations and stock abundance. There is no Pacific Salmon Treaty fishing agreement in place for 1996. In the event of an agreement, the fishing plan will be adjusted to reflect the fishing agreements. Notification of these adjustments will be made by a Notice to Industry.

2. MANAGEMENT OBJECTIVES

The troll fishing plan for 1996 was developed with consideration of the following objectives:

2.1. Manage the troll fishery in a manner that will provide maximum protection to returning adult WCVI chinook stocks and ensure that WCVI chinook conservation objectives are met. Conservation of WCVI natural and enhanced adult chinook stocks will be paramount.

2.2. Manage fisheries using a risk aversion management strategy to ensure that management objectives and escapement goals are met.

2.3. Meet Aboriginal fisheries obligations.

2.4. Develop a coho fishing plan that will maximize the value of catch.

2.5. Contribute to the Lower Strait of Georgia and Harrison chinook conservation programs.

2.6. Maintain manageability and enforceability of the plan.

3. AREA G HIGHLIGHTS

3.1. Trolling for coho, pink and chum will start July 8, 1996. The troll season is expected to end when the West Coast of Vancouver Island (WCVI) coho ceiling is reached, but may close sooner if domestic coho stock concerns are identified, or if chinook encounter rates and associated mortalities reach unacceptable levels.

3.2. In 1996, Area Licensing has been implemented. Vessels participating in the Area G WCVI Salmon Troll Fishery must hold a valid Area G Salmon Troll Licence. The Area G Licence Area includes Areas 20 to 27, 121 and Areas 123 to 127. In addition, a portion of Area 12 including Subareas 12-5 to 12-13, 12-15 and 12-16 are included in Area G when required to achieve Fraser River sockeye allocations.

3.3. There are severe conservation concerns with returning WCVI chinook stocks in 1996. Non-retention and non-possession of chinook will be in effect all season. There will be extensive chinook sensitive closed areas in effect to protect returning WCVI and other chinook stocks. These closures will include a corridor boundary along the West Coast of Vancouver Island which generally will follow the 40 to 60 fathom depth contour. In addition, all SWVI Conservation Areas will be closed except for Conservation Area F2.

3.4. A chinook encounter rate monitoring program will be implemented throughout the fishery to ensure that WCVI chinook conservation objectives are being met and that in season changes can be made if required. The intention of this program is to include an observer program on board trollers, as well as a voluntary log book program. The co-operation and support of fishers in this program is required to increase its effectiveness which will assist in maximizing coho fishing opportunities.

3.5. This fishing plan will provide the flexibility to make in season adjustments as required. Chinook sensitive closed areas will be expanded if required, or boundaries may be adjusted to provide more coho fishing opportunities in areas where chinook encounters are minimal.

3.6. The Fraser River sockeye pre-season run size forecast is 1.56 million, and there is no commercial TAC at this run size. Although it is unlikely the actual return will be sufficient to allow for an Area G fishery, if in-season run size forecasts increase, fishing plan strategies will be developed.

3.7. This is an off-cycle year for southern bound (Fraser River) pink. There will be no directed pink fishery.

3.8. Barbless Hooks - Following a meeting with Area G fishers and processors, there was a recommendation to implement a voluntary barbless (crimped) hook restriction for the 1996 season. Area G fishers are requested to support this recommendation. Further discussions on the barbless hook restriction will take place at the post-season meeting.

3.9. All times referred to in this plan are local times.

3.10. Proposed management actions and catch information for the WCVI will be broadcast to the fleet on Thursdays of each week at 1530 hours (July 11 until the end of the trolling season) on the following B.C. Tel marine band frequencies:

Victoria	CH 86	Kyuquot	CH 01
Jordan River	CH 23	Brooks Peninsula	CH 87
Pachena Point	CH 87	Winter Harbour	CH 27
Bamfield	CH 27	Holberg	CH 60
Tofino	CH 24	Port Hardy	CH 24
Estevan Point	CH 23		

Clarification of management actions or information can also be directed to identified in season Area G representatives. When these representatives are identified, Industry will be advised by a Notice to Industry.

3.11. Recorded phone service for Area G troll information is provided at the following locations:

Vancouver	**666-1506**
Tofino	**725-3245**
Port Hardy	**949-8181**
Nanaimo	**754-0281**
Pacific Salmon Commission	**666-8200**

4. AREA G WCVI TROLL FISHING PLAN

4.1. Assumptions Regarding Abundance

4.1.1. SOCKEYE

A return of 1.56 million Fraser River sockeye is forecast with no commercial catch expected. The diversion rate through Johnstone Strait is forecast (early June) to be 51%. Next diversion rate forecast date is mid-July.

4.1.2. COHO

The preseason forecast abundance of coho in the WCVI troll fishing area is 2.85 million (at a confidence limit of 90%, the 1996 forecast range in abundance is 1.96 million to 3.72 million coho). The forecasted abundance is similar to the abundance in 1995. It is assumed that the majority of the Strait of Georgia coho stocks will be present in the WCVI troll fishing area again in 1996.

4.1.3. PINK

This is an off-cycle year for southern bound (Fraser River) pink.

4.1.4. CHUM

Abundance of chum returning to the WCVI is expected to be below average and no surplus anticipated.

4.1.5. CHINOOK

The overall abundance of chinook stocks is expected to be similar to recent years. However, extremely poor returns of WCVI chinook stocks are expected. Minimum escapement requirements for WCVI chinook are not expected to be reached.

4.2. Allocations and Limitations

There will be no formal allocation plan for the 1996 season. Given that the expectations are so poor in 1996, Commercial Fishing Industry Council (CFIC) has recommended that DFO manage the 1996 commercial salmon fishery using the following prioritized allocation criteria:

1. Maximize the commercial harvest of the available surplus by commercial gear type.

2. Do not use the 1992 allocation plan for 1996.

3. Be fair and equitable as possible in allocating the available resources between the three gear sectors within the constraints of points 1 and 2 above.

4. The 1996 season should be considered as anomalous and, therefore, the 1996 Domestic Allocation Plan should not set any precedents for the Long Term Allocation Plan.

4.2.1. SOCKEYE

No commercial TAC of Fraser River sockeye is forecast. Non-retention and non-possession of sockeye will be in effect. If in-season run size forecasts increase and a commercial TAC is identified, allocation levels and fishing opportunities will be determined.

4.2.2. COHO

At the time of developing this fishing plan, it was unlikely a Pacific Salmon Treaty fishing agreement for 1996 would be reached. A coho management range of 1.1 million to 1.4 million pieces is expected. The final coho ceiling number will be based primarily on domestic stock concerns.

There will be no Red Line - Green Line coho management strategy in place in 1996. Extensive closed areas have been implemented to assist in meeting WCVI chinook conservation objectives. The opening or closing of additional areas will be primarily dependent on chinook encounter rates.

The minimum size limit for coho in Area G is 30 cm nose-fork length.

4.2.3. PINK

There will be no directed pink fishery and no established allocation. Catches will be incidental.

4.2.4. CHUM

There will be no directed chum fishery and no established allocation. Catches will be incidental.

4.2.5. CHINOOK

In order to meet WCVI chinook conservation objectives, there is no chinook allocation in 1996. Non-retention and non-possession of chinook will be in effect for the entire season.

There are severe conservation concerns with returning WCVI chinook stocks in 1996. There will be extensive chinook sensitive closed areas in effect to protect returning WCVI and other chinook stocks. These closures will include a corridor boundary along the West Coast of Vancouver Island which generally will follow the 40 to 60 fathom depth contour. In addition, all SWVI Conservation

Areas will be closed except for Conservation Area F2.

Chinook encounter rates will be monitored and further management actions to minimize chinook encounters will be made in season if required.

4.3. Plan Details

4.3.1. COHO, PINK AND CHUM FISHERIES

Trolling will open to Area G licence holders commencing at 0001 hours July 8, 1996, for coho, pink and chum and will be open 7 days per week in the following Areas:

OUTSIDE SURFLINE AREAS

Area	Subareas Open
121	Excluding Conservation Areas H, F1, G and S.
123	Excluding Conservation Areas A, B, C, D, H, I, J, K and L.
124	Excluding Conservation Areas D, E, K, L. Excluding the waters between Portland Point and Estevan Point that are easterly or shoreward of straight lines between the following Loran-C Position Coordinates: Position 5990-Y-29200, 5990-Z-41530 to Position 5990-Y-29350, 5990-X-14520 to Position 5990-Y-29450, 5990-X-14410. Note: All SWVI Conservation Areas are closed except for Conservation Area F2.
125 and 126	Excluding the waters between Estevan Point and Ferrer Point that are easterly or shoreward of a straight line between the following Loran-C Position Coordinates: Position 5990-Y-29450, 5990-X-14410 to Position 5990-Y-29550, 5990-X-14320 to Position 5990-Y-29610, 5990-X-14270, thence in a straight line to Ferrer Point on Nootka Island. Excluding the waters outside of Kyuquot Sound that are enclosed within the following boundary: Loran-C Position Coordinate 5990-Y-29610, 5990-X-14180 in a straight line to Position 5990-Y-29690, 5990-X-14080

Area	Subareas Open
	in a straight line to Position 5990-Y-29690, 5990-X-14120 in a straight line to Position 5990-Y-29610, 5990-X-14230 thence in a straight line to the point of commencement.
	Excluding the waters of Subarea 126-4 off Brooks Peninsula that are northeasterly or shoreward of a straight line between the following Loran-C Position Coordinates: 5990-Y-29737, 5990-X-14018 to Position 5990-Y-29757, 5990-X-13976.
127	Excluding the waters between Cape Cook and Triangle Island that are northeasterly or shoreward of a straight line between the following Loran-C Position Coordinates: 5990-Y-29757, 5990-X-13976 to Position 5990-Y-29790, 5990-X-13936 to Position 5990-Y-29860, 5990-X-13887 to Position 5990-Y-29890, 5990-X-13810 to Position 5990-Y-29960, 5990-X-13680 to Position 5990-Y-29992, 5990-X-13450.

INSIDE SURFLINE AREAS

All Areas and Subareas inside the surfline which include Areas 21 to 27 are closed.

Conservation Areas are defined as being the area within the position coordinates denoted below.

COORDINATE NUMBER	LORAN-C		LATITUDE (Degrees, Minutes)	LONGITUDE
Conservation Area S (Swiftsure)				
14	5990-Y-28960	5990-Z-41780	48034.34'N	125005.90'W
15	5990-Y-28960	5990-Z-41810	48036.13'N	124058.98'W
16	5990-Y-28904	5990-Z-41810	48029.30'N	124058.00'W
17	5990-Y-28875	5990-Z-41870	48029.62'N	124043.40'W

Conservation Area G (Swiftsure)

COORDINATE NUMBER	LORAN-C		LATITUDE (Degrees, Minutes)	LONGITUDE
15	5990-Y-28960	5990-Z-41810	48036.13'N	124058.98'W
18	Loran-C Line	5990-Y-28960	and Dare Point	
17	5990-Y-28875	5990-Z-41870	48029.62'N	124043.40'W
19	Bonilla Point Navigation Light			
Conservation Area A				
7	5990-Y-29090	5990-Z-41570	4839.25'N	125057.20'W
8	5990-Y-29090	5990-Z-41650	48043.68'N	125037.62'W
9	5990-Y-28980	5990-Z-41650	48028.70'N	125037.72'W
10	5990-Y-28990	5990-Z-41680	48032.00'N	125030.10'W
Conservation Area B				
7	5990-Y-29090	5990-Z-41570	48039.25'N	125057.20'W
8	5990-Y-29090	5990-Z-41650	48043.68'N	125037.62'W
11	5990-Y-29000	5990-Z-41600	48028.13'N	125050.65'W
12	5990-Y-28960	5990-Z-41660	48026.62'N	125035.20'W
13	5990-Y-28960	5990-Z-41740	48031.85'N	125015.30'W
Conservation Area C				
5	5990-Y-29140	5990-Z-41550	48045.30'N	126001.50'W
6	5990-Y-29140	5990-Z-41630	48049.43'N	125041.90'W
7	5990-Y-29090	5990-Z-41570	48039.25'N	125057.20'W
8	5990-Y-29090	5990-Z-41650	48043.68'N	125037.62'W
Conservation Area D				
3	5990-Y-29200	5990-Z-41530	48052.85'N	126005.30'W

COORDINATE NUMBER	LORAN-C		LATITUDE (Degrees, Minutes)	LONGITUDE
4	5990-Y-29200	5990-Z-41610	48056.60'N	125046.22'W
5	5990-Y-29140	5990-Z-41550	48045.30'N	126001.50'W
6	5990-Y-29140	5990-Z-41630	48049.43'N	125041.90'W
Conservation Area E				
1	5990-Y-29260	5990-Z-41530	49001.34'N	126004.05'W
2	5990-Y-29260	5990-Z-41580	49003.39'N	125052.55'W
3	5990-Y-29200	5990-Z-41530	48052.85'N	126005.30'W
4	5990-Y-29200	5990-Z-41610	48056.60'N	125046.22'W
Conservation Area F1				
13	5990-Y-28960	5990-Z-41740	48031.85'N	125015.30'W
14	5990-Y-28960	5990-Z-41780	48034.34'N	125005.90'W
16	5990-Y-28904	5990-Z-41810	48029.30'N	124058.00'W
22	5990-Y-28899	5990-Z-41740	48023.88'N	125014.85'W
Conservation Area F2				
13	5990-Y-28960	5990-Z-41740	48031.85'N	125015.30'W
20	5990-Y-28960	5990-Z-41530	48016.75'N	126011.55'W
21	5990-Y-28868	5990-Z-41530	48001.62'N	126014.60'W
22	5990-Y-28899	5990-Z-41740	48023.88'N	125014.85'W
Conservation Area H				
18	Loran-C Line	5990-Y-28960 and Dare Point		
13	5990-Y-28960	5990-Z-41740	48031.85'N	125015.30'W
24	Loran-C Line	5990-Z-41740 and Surf Line		

COORDINATE NUMBER	LORAN-C		LATITUDE (Degrees, Minutes)	LONGITUDE
Conservation Area I				
13	5990-Y-28960	5990-Z-41740	48031.85'N	125015.30'W
24	Loran-C Line	5990-Z-41740 and Surf Line		
8	5990-Y-29090	5990-Z-41650	48043.75'N	125037.35'W
23	Loran-C Line	5990-Y-29090 and Surf Line		
Conservation Area J				
6	5990-Y-29140	5990-Z-41630	48049.43'N	125041.90'W
25	Loran-C Line	5990-Y-29140	and Surf Line	
8	5990-Y-29090	5990-Z-41650	48043.75'N	125037.35'W
23	Loran-C Line	5990-Y-29090	and Surf Line	
Conservation Area K				
4	5990-Y-29200	5990-Z-41610	48056.60'N	125046.22'W
26	Loran-C Line	5990-Y-29200	48058.37'N	125036.81'W
6	5990-Y-29140	5990-Z-41630	and Wya Point	
25	Loran-C Line	5990-Y-29140	and Surf Line	
Conservation Area L				
2	5990-Y-29260	5990-Z-41580	49003.39'N	125052.55'W
27	Loran-C Line	5990-Y-29260	49004.00'N	125049.30'W
		(Vicinity Portland Point)		
4	5990-Y-29200	5990-Z-41610	48056.60'N	125046.22'W
26	Loran-C Line	5990-Y-29200	and Wya Point	

Note: See Figures 1 and 2 for an outline of closed areas including Conservation Areas.

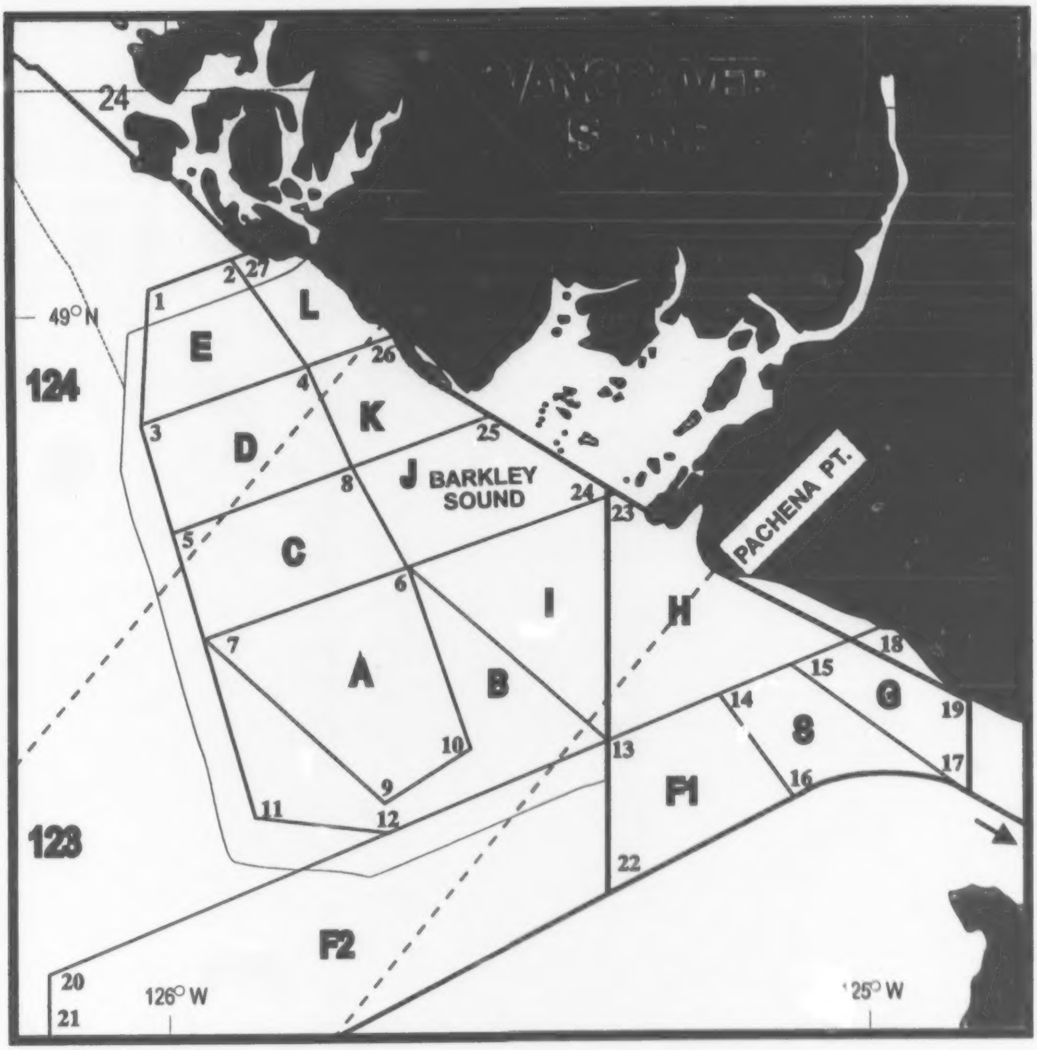
5. ENFORCEMENT

OBSERVE, RECORD AND REPORT:

FISHERIES VIOLATIONS	1-800-465-4336
WILDLIFE AND POLLUTION VIOLATIONS	1-800-663-9453

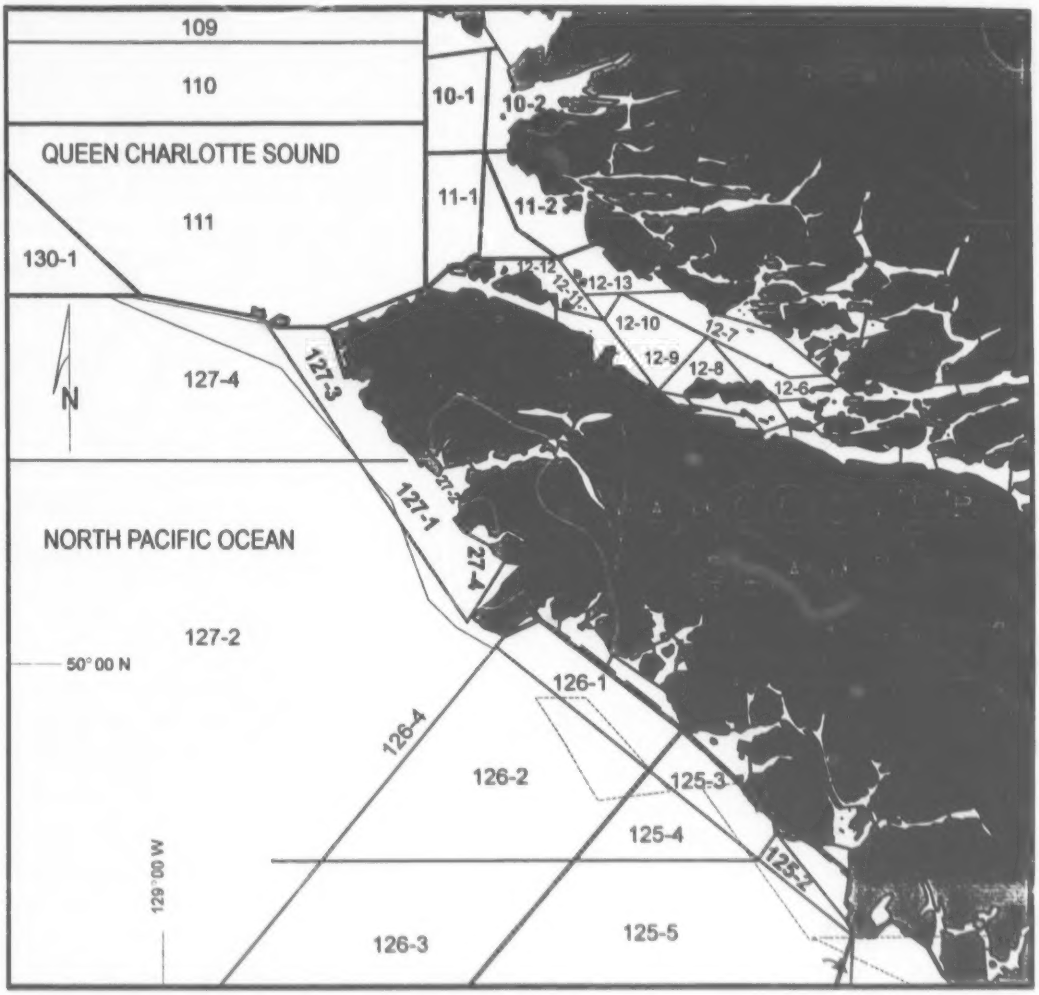
Users of the resource have a responsibility to report violators. Any suspected or actual violations can be quickly and discretely passed on to the appropriate Enforcement Officer by telephoning the toll-free Observe, Record and Report (ORR) Numbers for reporting fisheries or wildlife and pollution violations. This service is available 24 hours a day.

Figure 1. 1996 SWVI Area Closures.



Shaded areas represent closed areas. This map is for general information only. For exact boundary locations please refer to Loran C co-ordinates identified in this plan

Figure 2. 1996 NWVI Area Closures.



Shaded areas represent closed areas. This map is for general information only. For exact boundary locations please refer to Loran C co-ordinates identified in this plan.

APPENDIX 3

INFORMATION BULLETIN:

1996 SALMON NET AND TROLL MANAGEMENT PLAN

AREAS A,C,AND F

NORTH COAST

PACIFIC REGION

1996 SALMON NET AND TROLL MANAGEMENT PLAN

AREAS A, C, AND F

NORTH COAST

This Salmon Net and Troll Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the regulations, the regulations are the final authority.
A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

Fisheries and Oceans Canada | Pêches et Océans Canada

Canada

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1. INTRODUCTION

This fishing plan, developed after extensive input from a number of advisory boards, is based on pre-season forecasts of abundance. Although it is not stated under each week in each area, the management plan for any area can change in-season. Open subareas, provisions for extensions, opening patterns and the duration of the fishing season can all be adjusted based on stock abundance, fishing effort, or allocation considerations. All openings indicated in this plan are expected to occur, but are not guaranteed. Catches are limited by conservation concerns, domestic allocations, and stock abundance.

Canada and the United States have not reached an agreement for 1996 Pacific Salmon Treaty fisheries. Further information will be released as soon as it is available.

2. MANAGEMENT OBJECTIVES

The fishing plan for 1996 was developed to meet a number of objectives that include the following:

2.1. Manage fisheries using a risk aversion management strategy to ensure that management objectives and escapement targets are met.

2.2. Meet Aboriginal fisheries obligations.

2.3. Manage the troll and interception net fisheries in a manner that will provide maximum protection to passing West Coast Vancouver Island chinook stocks and ensure that WCVI chinook conservation objectives are met.

2.4. Net fishers in Areas 3 to 10 are asked to release all live chinook to the water with the least possible harm.

2.5. Minimize the incidental harvest of steelhead, coho, and chinook salmon. Special conservation measures for specific stocks are included in this fishing plan.

2.6. Direct fisheries onto surplus stocks while minimizing impacts on depressed or weak stocks.

2.7. Maintain manageability and enforceability of the plan.

3. ALLOCATIONS AND LIMITATIONS

There will be no formal allocation plan for the 1996 season. Given the uncertainties in 1996, CFIC has recommended that DFO manage the 1996 commercial salmon fishery using the following prioritized allocation criteria:

1. Maximize the commercial harvest of the available surplus by commercial gear type.

2. Do not use the 1992 allocation plan for 1996.

3. Be as fair and equitable as possible in allocating the available resources between the three gear sectors within the constraints of points 1 and 2 above.

4. The 1996 season should be considered as anomalous and, therefore, the 1996 Domestic Allocation Plan should not set any precedents for the Long Term Allocation Plan.

4. NORTH COAST NET FISHING PLANS

The following net fishing plans list only the starting dates for various fisheries. Subsequent openings will depend on stock strength.

4.1. Area 1

4.1.1. CHINOOK

Mandatory release of all chinook.

4.1.2. PINK

Even year returns. No surpluses anticipated. However, stock assessment fisheries anticipated in Masset Sound and Masset Inlet to assess the strengths of incoming stocks.

4.1.3. CHUM

No surpluses forecast, small assessment fisheries planned.

4.1.4. PROPOSED FISHING PATTERN

Effective Date	Action
Aug 12	Open to nets for 12 hours in a portion of subarea 1-6. Boundaries to be announced in season. Subsequent openings will depend on stock strength indicators.
Sept 9	Open to nets for 12 hours (0800 H to 2000 H) in a portion of 1-3 (east of a line true north from Cape Edenshaw) and 1-5 (west of a line true north from Skonun Point) to assess the strength of chum salmon migrating into Masset Inlet. Fleet size and catch are expected to be small. Subsequent openings will depend on stock strength indicators.

4.2. Area 2W

4.2.1. CHINOOK

Mandatory release of all chinook.

4.2.2. PINK

Even year returns. Little or no surplus anticipated. Returns have been highly variable in the past and forecasts have been unreliable. Directed terminal fisheries will be initiated based on in season stock assessments.

4.2.3. CHUM

Surpluses anticipated in Tasu Inlet (30,000). Returns have been highly variable in the past and forecasts have been unreliable. Directed terminal fisheries may be initiated based on in-season stock assessments.

4.2.4. PROPOSED FISHING PATTERN

There will be no commercial net openings in Rennell Sound due to concerns for WCVI chinook stocks.

Possible opening in Tasu Sound in late September, subject to in-season stock assessment.

4.3. Area 2E

4.3.1. CHINOOK

Mandatory release of all chinook.

4.3.2. PINK

Even year returns. Minor surpluses totalling about 180,000 anticipated with contributors located in Skidegate Inlet and Cumshewa Inlet. Returns have been highly variable in the past and forecasts have been unreliable. Directed terminal fisheries will be initiated based on in-season stock assessments.

4.3.3. CHUM

Surpluses anticipated to Skidegate Inlet (25,000) and Cumshewa Inlet (130,000). Directed terminal fisheries will be initiated based on in-season stock assessments.

4.3.4. PROPOSED FISHING PATTERN

Effective Date	Action
Aug 19	Open to nets for 12 hours in portions of subareas 2-1 and 2-4. Boundaries to be announced in season.
Aug 26	Open to gillnets for 12 hours in portions of subareas 2-3 and 2-4.
Sept 9	Open to nets for 12 hours in portions of subareas 2-3 and 2-4. Subsequent openings will depend on stock strength indicators.

4.4. Area 3

4.4.1. SOCKEYE

In 1996 preliminary expectations are for an above average return of 600,000 sockeye to Canadian waters, due to strong escapements in both the 1991 and 1992 brood years and strong returns of 3 and 4 year old fish in 1995.

4.4.2. PINK

Pink expectations are for well below average returns due to below desired escapements in the brood year.

4.4.3. CHUM

Anticipate poor survivals from the 1992 chum escapement due to severe flooding and freezing conditions in the fall and winter of 1992. This will likely result in limited fishing opportunities in August in Area 3.

4.4.4. PROPOSED FISHING PATTERN

Effective Date	Action
June 10	Open to gillnets for 24 hours 1800 Monday, June 10 in the portion of 3-1 north of a line running true west from Arniston Pt., 3-2, 3-3, 3-4, 3-7 and the portion of 3-12 south of a line from Trefusis Pt. to a boundary sign on Pearse Island approximately 1.75 miles north of Lizard Pt. light. Max. mesh 137 mm. Future fishing opportunities based on in-season sockeye and pink run size assessment.
July 14	Open to nets for 24 hours 1800 hours Sunday, July 14 in the portion of 3-1 north of a line due west of Arnazazu Pt. and northeast of a line from Jacinto Pt. to the most northern tip of Prince Lebo Isl., 3-2, 3-3, 3-4, 3-7, 3-11. 3-13 and 3-17 may open depending on pink and sockeye strength. Max mesh 137 mm. Future fishing opportunities based on in-season sockeye and pink run size assessment.

4.5. Areas 4 and 5

4.5.1. SOCKEYE

Preliminary expectations call for an above average Skeena sockeye return of 3 to 3.5 million fish to Canadian waters. This is the result of large returns of age 3 and 4 sockeye to the Skeena in 1995.

Area 5 sockeye returns are expected to be average to slightly above average as well.

4.5.2. PINK

Due to well below desired escapement levels to all Skeena tributaries in 1994 the forecast return in 1996 of approximately 800,000 will not meet escapement requirements.

Area 5 pink returns are expected to be very poor with a total return forecast to be 125,000.

4.5.3. CHUM

It is anticipated poor survivals from the 1992 chum brood combined with low escapement levels in all brood years will result in a poor chum return in 1996 to both the Skeena and Area 5 streams.

4.5.4. PROPOSED FISHING PATTERN

The proposed fishing plan for Area 4 is much more detailed than other areas due to a fishing plan that has been agreed to by the commercial, aboriginal, and recreational sectors, accomplished through the Skeena Watershed Committee. Area 5 will generally follow Area 4 during sockeye fisheries.

1996 AREA 4 FISHING PLAN

The following fishing plan will be in place for Area 4 in 1996. As always, DFO reserves the right to alter this plan in the event of conservation concerns.

The overriding objective of the fishing plan is to establish fishing patterns that result in estimated commercial harvest rates not exceeding 19% for coho; 21% for steelhead; and 33% for early timing steelhead, while attempting to maximize the harvest rate of sockeye.

4.5.5. COMMERCIAL GILLNET FISHING PLAN

Early Chinook Fishery: weeks 24 and 25 (Jun 9 - Jun 22)

Two weeks; two daylight openings; not to exceed 4,000 chinook; minimum mesh size 203 mm (8").

Sockeye Fishery: weeks 26 through 31 (Jun 23 - Aug 3)

With ordinary run timing, the peak of the sockeye migration through the fishing area occurs on July 21. The sockeye fishing plan is constructed to provide a controlled fishing opportunity on early run stocks, an aggressive fishing pattern in mid-July on enhanced stocks, and a cautious approach at the end of July as steelhead and summer coho stocks begin moving through the fishing area in increasing numbers.

Food fish days are incorporated into the fishing plan this year to ensure certainty to this fishery, and allow fishers participating to plan their fishing activity in advance. Indicated days are reserved for food fishing, to allow more access to those fishers that find it difficult to participate on short notice.

Due to the uncertainty in fleet size in 1996, and in keeping with the agreed upon fishing plan, an additional day of gillnet fishing will be allowed in weeks 30 and 31 if stocks warrant and if the effort is significantly below expected levels.

Pink Fishery: weeks 32 and 33 (Aug 4 - Aug 17)

Normally, management emphasis would shift to pink salmon on week 32. In 1996, pink returns to the Skeena are expected to be poor. One day per week fisheries are scheduled.

Coho Fishery: weeks 34 to 38 (Aug 18 - Sep 21)

No fishing will occur on weeks 34 to 36. Two openings are scheduled to occur in weeks 37 and 38, with a maximum harvest of 3,000 coho.

4.5.6. GILLNET SELECTIVE GEAR TEST

A test of gillnets for the purpose of finding a net that is both more selective and efficient will be conducted in the Skeena area in 1996. The study will be conducted with 100% observer coverage and will examine catches of steelhead and all salmon species, as well as mammals and birds. Vessels will be fishing in groups of four in Areas 3 and 4 outside the River/Gap/Slough area, and singly inside the River/Gap/Slough area. These vessels will be using a variety of nets, will be fishing during all the commercial openings, and will fish two extra days, indicated on the fishing plan calendar.

June 1996

Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15 Gillnet Commercial
16	17 Gillnet Commercial	18	Food Fishing (Section 35.1) Opportunities			
Food Fish			26 Gillnet Commercial	Gillnet Commercial		Food Fish
Food Fish Gillnet Commercial						

MAY

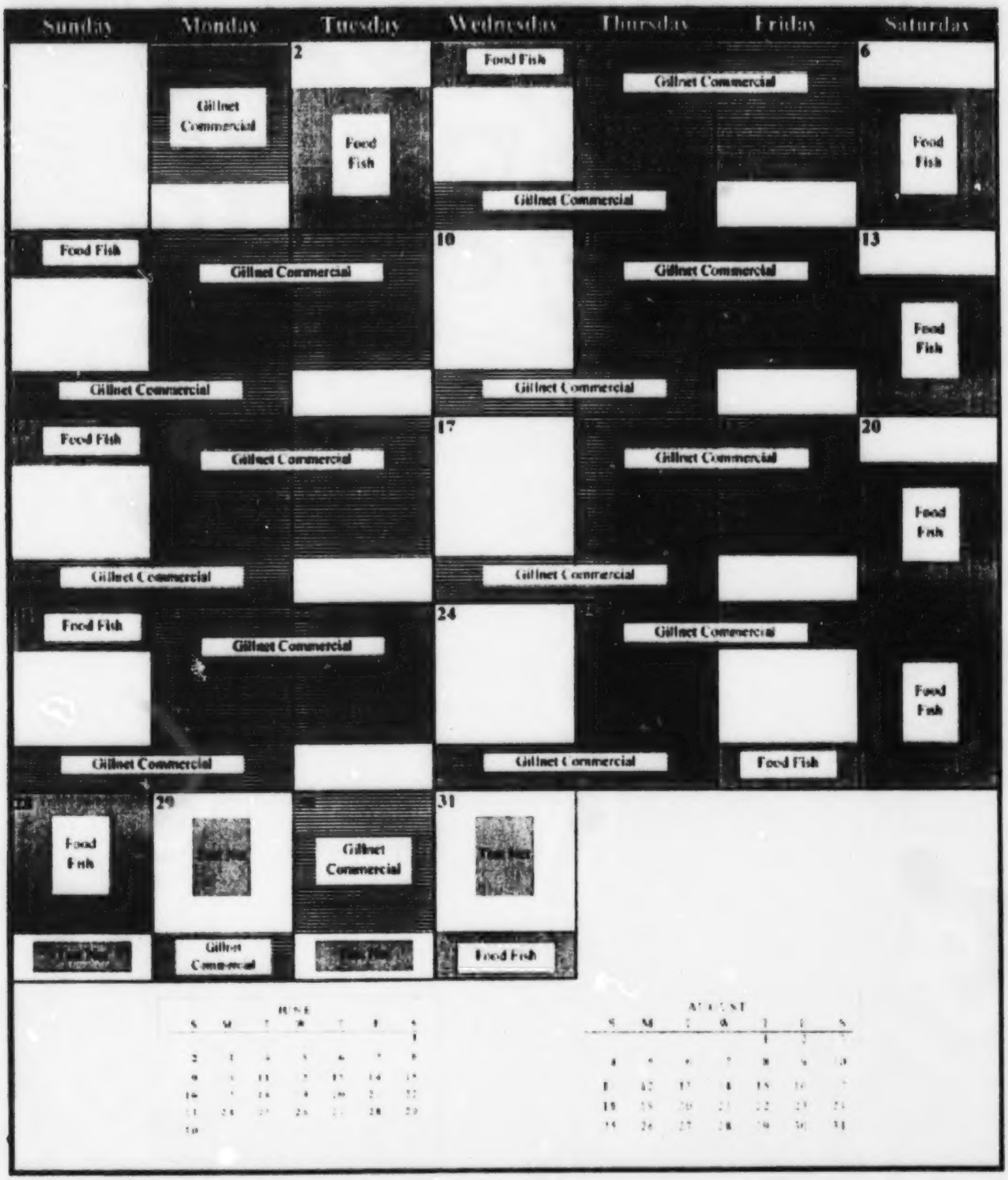
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JULY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

July 1996

Monthly Planner



August 1996

Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
* Possible selective seine day depending on run strength				Food Fish		3 *
4 *	5 *	6 Gillnet Commercial	Gillnet Commercial	8 *	9 *	10 *
11 *	12 *	13 Gillnet Commercial	Gillnet Commercial	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JULY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

September 1996

Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9 **Gillnet Commercial**	10 **Gillnet Commercial**	11	12	13	14
15	16 **Gillnet Commercial**	17 **Gillnet Commercial**	18	19	20	21
22	23	24	25	26	27	28
29	30					

AUGUST

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

4.5.7. SELECTIVE SEINE FISHERY

As situations warrant, selective seine fisheries will occur in 1996. At the present time, details of this fishery are being worked out by the North Coast Advisory Board

4.6. Area 6

4.6.1. PINK

Due to well below desired escapement levels to all Area 6 streams in 1994, the forecast return for 1996 of 600,000 is below the target escapement for the area.

4.6.2. CHUM

It is anticipated poor survivals from the main brood year in 1992 due to flooding and freezing conditions will result in a poor chum return in 1996. The only surplus anticipated for 1996 is to the Kitimat hatchery.

4.6.3. PROPOSED FISHING PATTERN

Effective Date	**Action**
June 24	Open to gillnets as an assessment fishery of chum in subareas 6-6 (south of a line from Cape Farewell to a boundary sign located approx. 2 miles north of Gibble Cr.), 6-7, 6-10 (inside a line running from the southern tip of Campania Isl. to McPhee Pt. on Princess Royal Isl.) and 6-26 to 6-28. Subsequent openings will depend on stock strength indicators and input from advisors.
July 14	Open to nets for 12 hours 0600 hours Monday July 15 in subareas 6-5, 6-6 (south of a line from Cape Farewell to a boundary sign located approx. 2 miles north of Gibble Cr.), 6-7, 6-10 (inside a line running from the southern tip of Campania Isl. to McPhee Pt. on Princess Royal Isl.) and 6-26 to 6-28.

4.7. Area 7

4.7.1. PINK

There is a surplus of 172,000 with the majority of the surplus expected to return to Neekas and Carter Rivers.

4.7.2. CHUM

There is no identified natural surplus in Area 7 for 1996. There are some small hatchery surpluses.

Hatchery Chum

Kitasu Creek Hatchery is expecting a surplus of 6,000 chum with no surplus of coho. The chum surplus will provide some directed fisheries.

McLoughlin Creek Hatchery is expecting a surplus of 22,000 chum and a small number of coho. This will provide directed fisheries in Lama Pass.

4.7.3. PROPOSED FISHING PATTERN

Effective Date	Action
July 15	Open to gillnets for 1 day in Subareas 7-4 (North of Oscar Pass), 7-5, 7-6 (South of Denton Point) and 7-9 (North of a line from Guard Point to Stapeleton Point). The Mary Cove boundaries will be in effect to conserve Sockeye.
Aug 12	Open to seines for 12 hours in a portion of Subarea 7-17 between Story Point and Archibald Point targetting McLoughlin Hatchery Chum. Gear types will alternate as in previous years.
Sep 2	Open to gillnets and seines for 1 day in 7-13.

NOTES

- The first in-season advisory board meeting will be held Thursday morning July 25, 1996 in Bella Bella.

- Short notice announcements and/or short duration fisheries may be held after the August 12th fishery in the McLoughlin Bay. The announcement times may be such that only vessels currently on the grounds will be able to participate. These actions are necessary to ensure safe fisheries and manageable fleet sizes when harvesting limited surpluses in confined areas.

- DFO will attempt to harvest surplus chum returning to Kitasoo Hatchery in Finlayson Channel. If surpluses are not caught in Finlayson Channel, fisheries in the Klemtu Pass area may be considered subject to conservation concerns and native food fish requirements. Openings targetting on Kitasoo Creek Hatchery stocks in terminal areas would only be considered after August 26th and would follow the pattern of gillnets fishing first and seines second.

4.8. Area 8

4.8.1. SOCKEYE

A small surplus of 9,000 sockeye is expected to the Atnarko River.

4.8.2. PINK

The total projected returning stock of pink to the Atnarko River is anticipated to be 760,000. No surplus has been forecast for Area 8 pink. Any catches will be incidental in other fisheries.

4.8.3. CHUM

A surplus of approximately 213,000 chum is anticipated to the Bella Coola River. This surplus includes the hatchery contribution of 180,000. There is no surplus identified to the Kimsquit River.

4.8.4. CHINOOK

There is a small surplus of approximately 9,000 Atnarko chinook anticipated. However, forecast returns in the past have over estimated the actual return.

4.8.5. PROPOSED FISHING PATTERN

Effective Date	**Action**
June 3	Open to gillnets for 1 day in Subareas 8-10, 8-11, 8-12 (North of Bensins Island), 8-13 (North of the Southern most point in Restoration Bay) and 8-15. Minimum mesh restriction of 203 mm will be in effect. Further Chinook openings will depend on stock strength.
July 1	Open to gillnets for 1 day in Subareas 8-3, 8-4, 8-5, 8-10, 8-11, 8-12 (North of Bensins Island), 8-15. Minimum mesh restriction of 149 mm.
July 22	Open to gillnets and seines for 1 day in Subareas 8-3, 8-4 and 8-5 (South of a line from Farewell Point to a prominent point 0.7 miles North of Bold Point). Open to gillnets for 1 day in Subareas 8-8, 8-10, 8-11, 8-12 (North of Bensins Island), and 8-15. Subsequent openings will depend on in-season management actions based on run strength and input from advisors. Any openings in 8-5 north of Bold Pt. and 8-8 will depend on chum strength and any potential openings will be subject to steelhead conservation measures outlined below. **Gillnets:** Gillnets are required to use a weedline 100 cm to 154 cm (40 to 60 inches) below the corkline in 8-5 north of Bold Pt. and 8-8. **Seines:** Mandatory release of steelhead by seines in 8-5 north of Bold Point. **Seine Steelhead Release Procedure:** Seines are required to dry up sets alongside their vessel. Using a skiff and a small dip net, steelhead are to be removed from the pursed seine net. The remaining salmon are then to be brailed onto the deck and any remaining steelhead carefully released. In the event of large sets, salmon shall be sorted from the pursed seine net into

Effective Date **Action**

the brailer. Small dip nets work well for sorting salmon and capturing steelhead from the seine net. It is not acceptable to bring fish over the stern or use stern ramps.

Non-compliance with the seine steelhead release procedure may result in closure of the fishing area.

Notes

- Mesh restrictions in the Bella Coola Gillnet Area may be rescinded to allow a targetted gillnet sockeye fishery during the week commencing July 7 if Native Food Fish catches in the Bella Coola River suggest the Atnarko sockeye return is strong.
- Weedlines and Seine Release programs for steelhead will be in effect during the period from July 14 to August 10.
- Commercial fisheries in Area 8 will be closed for 3 consecutive days in every week to protect weaker non-target salmon stocks.
- A joint Area 7 and Area 8 in-season advisory meeting is scheduled for Thursday morning July 25, 1996 at Bella Bella.

4.9. Area 9

4.9.1. SOCKEYE

The total projected returning stock of sockeye to Rivers Inlet is estimated to be 260,000.

4.9.2. PINK

Brood year escapement continues to be extremely poor. No expected surplus.

4.9.3. CHUM

Brood year escapements continue to be extremely poor. No expected surplus.

4.9.4. PROPOSED FISHING PATTERN

A precautionary, risk averse approach to in-season management will be adopted for 1996. The strength of sockeye returns to Rivers and Smith inlets has been highly correlated in past years; strong returns to Smith Inlet in 1996 would indicate that severe marine mortality was not a general problem and this would reduce the concern for a poor return to Rivers Inlet in 1996. Based on this reasoning, the Docee River Counting Fence in Area 10 (Smith Inlet) will be used as an initial indicator of returns to Rivers Inlet. The Docee Fence Index is defined as the theoretical fence count (catch plus escapement past the fence).

A modified assessment fishery will occur in Rivers Inlet only if the Docee Fence Index reaches or exceeds 50,000 by July 13. To safeguard against the chance of opening on a small run, the size of the commercial fishing area will be reduced during the modified assessment fishery to limit potential harvest. This restricted area will be the average distance that a sockeye swims in a day (approximately 20 km). This assessment fishery will last for 24 hours. The current in-season management model will be used to assess run strength using catch rate and total catch information. Further commercial openings will depend on the results of the assessment fishery.

The open area in any fishery as described above would be from Bilton Island to the most prominent point on the opposite shore north of Duncanby Landing and from the mainland across to the northern tip of Edna Mathews Island to a prominent point on the opposite side.

Notes

- The in-season Advisory meetings will likely be set for 10:00 a.m. on the day following the last day of fishing for the week. Announcements on the grounds will be made confirming the dates and times.

4.10. Area 10

4.10.1. SOCKEYE

1991 and 1992 brood escapements met the target and were 260,000 and 220,000 respectively. The return of age 4 sockeye from the 1991 brood in 1995 was very poor. It is anticipated that this condition will likely apply to the return of age 5 sockeye in 1996.

4.10.2. PINK

Brood year escapement continues to be extremely poor. No surplus projected.

4.10.3. CHUM

Brood year escapements continue to be extremely poor. No surplus projected.

4.10.4. PROPOSED FISHING PATTERN

Effective Date	Action
July 1	Open to gillnets 1 day in Subareas 10-3, 10-4, 10-5, 10-6, 10-7, 10-8, and 10-9. Maximum mesh size is 150 mm.
July 8	Open to gillnets 1 day in Subareas 10-3, 10-4, 10-5, 10-6, 10-7, 10-8, and 10-9. Maximum mesh size is 150 mm. Subsequent openings will depend on Docee River fence count and total catch to date.

5. TROLL FISHING PLAN

5.1. Highlights

5.1.1. Trolling for sockeye, coho, pink and chum will start July 8, 1996. Recent North Coast troll fisheries have closed prior to September 15. The length of the troll season will be dependent on a combination of viable catch, effort and shaker incidence. Any single factor or combination of these factors which are negatively impacted may result in the closure of the fishery.

5.1.2. There are severe conservation concerns with WCVI chinook stocks in 1996. Management actions require the implementation of non-retention and non-possession of chinook salmon in Area F - North Coast for the 1996 season, as well as closures in chinook red-line areas.

5.1.3. There will be no fisheries on southern bound (Fraser River) sockeye stocks.

5.1.4. Conservation measures implemented to address upper Skeena coho stocks will remain in effect in 1996.

5.1.5. Skeena River pink stocks are expected to return in very low numbers.

5.1.6. All times referred to in this plan are local times.

5.1.7. The North Coast Troll test fishery is suspended in 1996.

5.1.8. Proposed management actions and catch information for the North Coast will be broadcast to the fleet only on an as required basis due to the limited nature of the fishery in 1996. Dates and times of any broadcasts will be transmitted to the fleet via DFO patrol vessels, Coast Guard weather channels and via the 24 hour troll fishery information service.

5.1.9. Clarification of management actions or information should be directed to In-season Advisors on the North Coast Troll Management Committee.

5.2. Recorded phone service for troll information is provided at the following locations.

Vancouver	666-1506
Prince Rupert	627-3470*
Tofino	725-3245
Port Hardy	949-8181
Nanaimo	754-0281
Pacific Salmon Commission	666-8200

* Fishers are advised that the Prince Rupert information number has been changed.

5.3. MANAGEMENT APPROACH - BY SPECIES

5.3.1. SOCKEYE

The Outside troll catch ceiling has been 5% of the Areas 1, 3, 4 and 5 all-gear, non-Fraser sockeye catch. The returns of North Coast sockeye are expected to be average to above average. When and as opportunities arise, additional opportunities will be provided to harvest Skeena River sockeye. There will be no fisheries directed on southern bound (Fraser River) sockeye stocks.

5.3.2. COHO

Skeena coho returns are expected to be poor based on recent trends. The Skeena coho conservation actions implemented in 1995 will remain in effect for 1996 to further the objective of increasing escapements to the Upper Skeena River.

5.3.3. PINK

North coast pink returns are expected to be below average.

There is no Pacific Salmon Treaty agreement for Area 1 pink salmon.

5.3.4. CHUM

Chum abundance is expected to be below average.

5.3.5. CHINOOK

The North Coast Troll fishery will be managed to address conservation on domestic stock concerns relative to West Coast Vancouver Island chinook.

In order to achieve minimum escapement targets, non-retention and non-possession of chinook will be in effect for the 1996 season.

5.4. PLAN DETAILS

5.4.1. NORTH COAST COHO, PINK AND CHUM OPENINGS

The following management Areas will open, 7 days per week, to commercial trolling for coho, pink, and chum salmon on:

July 8, 1996 (0001 hours)

Outside Surfline - Areas 102, 105 to 110, and portions of Areas

101 (Chinook Red-line boundary in effect), 103 and 104 (Area 111 closed for the 1996 season).

Inside Surfline - AREAS 1 to 5 and 11

Area	Subareas Open
1	Subarea 1-5 and that portion of Subarea 1-3 easterly and seaward of a line running true North from Cape Naden to its intersection with the surfline at 54 degrees 08.9 minutes N. and 132 degrees 34.9 minutes west (Chinook Redline Boundary in effect).
2E	All Subareas.
2W	None.
3	That portion of Subarea 3-1 (Caamano Passage) eastward of a line running from the flashing light on the south end of Zayas Island to the southernmost point on Prince Leebo Island and north of 54 degrees 37.00 minutes N. from the most northwesterly point on Zayas Island.
4	None.
5	All Subareas.
11	None.

Areas 2, 3 (except portion of Subarea 3-1) and 5 will also open to trolling for **sockeye**, coho, pink, and chum **during net times and net areas** after 0001 hours July 8, 1996. Area 4 (except a portion of Subarea 4-1) will remain closed during net fishing times and areas all year.

In response to domestic stock concerns on WCVI chinook, troll opportunities in Areas 6 to 10 will be limited to net fishing times and areas only until 2359 hours July 31, 1996 with non-retention and non-possession of chinook salmon in effect.

5.4.2. CENTRAL COAST COHO, PINK AND CHUM OPENINGS

The following management Areas will open, 7 days per week, to commercial trolling for coho, pink and chum on (see Figure 8):

August 1, 1996 (0001 hours).

Inside Surfline - AREAS 6 to10

Area	Subareas Open
6	6-9, 6-11, 6-13, 6-17 and that portion of 6-10 seaward of a line from McPhee Point on Princess Royal Island to Eclipse Point on Campania Island.
7	7-1, 7-2, 7-18, 7-19, 7-20, 7-23, 7-25, 7-26, 7-27, 7-31 and 7-32.
8	8-1.
9	That portion of 9-1 seaward and outside of a line running from Harold Point to Kelp Head.
10	Those portions of 10-1 and 10-2 lying north of a line due West from Bay Point to the surfline.

Areas 6 to 10 will also open to trolling for **sockeye**, coho, pink, and chum **during net times and net areas** after 0001 hours August 1, 1996. Further measures may be required inside surfline areas to address conservation concerns on Fraser River sockeye.

5.4.3. NORTH COAST SOCKEYE OPENINGS

The following portion of Dixon Entrance and Hecate Strait will open to sockeye troll fishing 7 days/week:

July 8, 1996 (0001 hours) **until July 19, 1996** (2359 hours)

Outside Surfline - Subareas 101-3 (except that portion inside the Chinook Red-line Boundary), 101-4 to 101-6, 101-7 (except that portion inside the Chinook Red-line Boundary), 101-8 to 101-10, Subarea 102-1, Area 103 north of 54 degrees 37.00 minutes North, a portion of Subarea 104-1 outside and westerly of 131 degrees 18.00 minutes West, a portion of 104-3 Wouth of 54 degrees 00.00 minutes North, 104-4, 104-5, and Area 105.

Inside Surfline - A portion of Subarea 1-3 easterly and seaward of a line running true North from Cape Naden to its intersection with the surfline at 54 degrees 08.9 minutes North, 132 degrees 34.9 minutes West, subarea 1-5, portions of Subarea

3-1 North of 54 degrees 37.00 minutes North and that portion which is Caamano Passage eastward of a line running from the flashing light on the south end of Zayas Island to the southernmost point on Prince Leebo Island and Area 5 (all Subareas) (see Figure 1).

The following Areas will remain open throughout the season to allow for continued harvesting of Skeena sockeye:

Portions of Areas 1 and 101 (except those portions inside the Chinook Red-line Boundary) easterly of 133 degrees 00.00 minutes West, Subarea 102-1, portion of Subarea 3-1, Areas 5 and 105 (see Figure 2).

5.5. Dundas Island (Subarea 3-1) Management

The following Areas will open to sockeye retention in conjunction with the implementation of the coho closure in Subarea 3-1:

Those previously closed portions Area 103 and Subarea3-1;

Those portions of Subareas 104-1 and 104-2 North of 54 degrees 24.00 minutes North;

That portion of Subarea 4-1 seaward and westerly of a line running true south from the flashing light on the southernmost point of Dundas Island to 54 degrees 24.00 minutes North, thence running true West along 54 degrees 24.00 minutes North to its intersection with the surfline (see Figure 3).

Non-retention and non-possession of chinook and coho will be in effect in these Areas and trollers are requested to crimp the barbs on their hooks to reduce shaker mortalities. These Areas will be closely monitored and if excessive shakers are observed, further actions including a closure may be necessary.

Non-retention and non-possession of sockeye will be in effect in Areas 7 to 10 except during net fishing times and areas (for conservation of Fraser River sockeye).

Trollers must offload their sockeye catches prior to engaging in fisheries outside the surfline where non-retention/non-possession of sockeye is in effect.

5.6. Fraser Sockeye

Sockeye returns to the Fraser River are not expected to provide harvestable surpluses. Consequently, there will be no directed fisheries on these stocks in 1996 and future fisheries conducted in Area F- North Coast will be limited to assessment purposes only.

Any assessment fisheries will be conducted in accordance with Regional management objectives and strategies implemented on these stocks and in consultation with the North Coast Troll Management Committee.

5.7. North Coast Troll Test Fishery

The North Coast Troll test fishery conducted in Area 2W over the past two years will be suspended for 1996. Future test fisheries will be implemented based on need and the ability to meet the objectives/requirements set out for such fisheries and will be developed in consultation with the North Coast Troll Management Committee.

5.8. Coho

Conservation measures implemented since 1989 continue to be monitored for their effectiveness in addressing conservation concerns for upper Skeena stocks. Area 4 (except portion of Subarea 4-1) inside the surfline will be closed to trolling all year including during net fishing times and areas.

In addition, effective 0001 hours July 8, 1996 and until further notice the following Areas will remain closed to all trolling to conserve upper Skeena coho (see Figure 4):

A portion of Subarea 3-1 westerly of a line running from the flashing light on the south end of Zayas Island to the southernmost point on Prince Leebo Island and south of 54 degrees 37.00 minutes North from the most northwesterly point on Zayas Island.

Area 103 south of 54 degrees 37.00 minutes North.

Subarea 104-2.

A portion of Subarea 104-1 inside and easterly of 131 degrees 18.00 minutes West.

A portion of Subarea 104-3 North of 54 degrees 00.00 minutes North.

Every attempt will be made to lift the Skeena River Coho Closure in a timely manner to provide for fall coho harvest opportunities. Criteria that will be utilized to lift this closure will include positive indications of overall abundance of coho stock strength in the Dixon Entrance and Hecate Strait approaches to the terminal area, shaker incidence, and meeting desired escapement indices as observed in the test fishery on the Skeena River.

5.9. Dundas Island Management (Subarea 3-1)

A large portion of the North coast is closed to address domestic stock concerns related to WCVI chinook and early timed Skeena coho. As a result of these closures, effort in 1995 far exceeded recommended levels in the Subarea 3-1 periphery of the Skeena River Coho Closure.

Effort levels in 1996 are again expected to exceed these recommended levels. Accordingly an effort limitation of 50 boats per day; 350 boat days per week guideline has been established for Subarea 3-1. If these effort levels are compromised, non-retention of coho will be implemented.

In order to minimize disruption to fishing trips, non-possession of coho will be implemented five days after the non-retention provision takes effect. It is anticipated that the non-retention provision may be implemented by July 15, with non-possession taking effect by July 20. In conjunction with this coho closure, further opportunities to harvest Skeena sockeye will be provided.

As there is no chinook allocation for 1996, the following troll closure will be implemented at 2359 hours, August 25, 1996 to reduce chinook shaker problems (see Figure 5).

That portion of Subarea 105-1 south of 54°00'.00" N. and inside and easterly of 131°18'.00" W. to its intersection with the seaward/westward boundary of Subarea 102-1.

If in-season information suggests that the relative abundance of coho in Subarea 105-1 will permit the coho fishery to continue, then consideration will be given to adjusting the closed area.

Adjustments will be made in consultation with designated in-season advisors. The intent of this closure is to enhance the opportunity to fish coho in September, dependent on coho abundance.

Further opportunities to harvest late run coho in other North coast areas will be implemented when surpluses are identified and where shaker incidence in minimal.

5.10. Northern Pink

There is no Pacific Salmon Treaty catch ceiling on Area 1 pinks in 1996. If it becomes evident that Skeena / Nass pinks are at very low levels, then restrictions can be expected on troll fisheries.

5.11. Chum

No restrictions are anticipated in 1996.

5.12. Chinook

The management intent for the North Coast troll fishery is to address Canadian stock concerns. The fishing plan has been developed in consideration of minimizing chinook encounter rates and shakers while providing the opportunity to extend the season to harvest other species.

In response to recommendations from the North Coast Troll Management Committee, modifications to some closed areas may be implemented in order to provide harvest opportunities on anticipated fall coho and chum surpluses. Trollers are advised that these opportunities may be limited both in area and time duration. Any areas opened on this accord will be monitored for shaker incidence and be subject to effort controls. Consequently, these fisheries may close on short notice.

In order to address these criteria and achieve minimum escapement targets for WCVI chinook, non-retention and non-possession of chinook salmon will be implemented for the 1996 fishing season.

In accordance with the aforementioned the following measures will be implemented.

1. The following Subareas will be closed from 0001 hours July 8, 1996 until further notice: Subareas 1-1, 1-2, 1-7, 101-1, 101-2, 2-31 to 2-100, 130 and 142 (see Figure 6).

2. In 1996, an area closure (CHINOOK RED LINE BOUNDARY) will be implemented from 0001 hours July 8, 1996 for the season. The following points define the outside boundary of the closed area (see Figure 7):

		LATITUDE	LONGITUDE
POINT 1)	Commencing at Cape Naden		
POINT 2)	thence true North for approx. 6 miles to	54°13.20'N	132°35.00'W
POINT 3)	thence 275° true for 11.8 miles to	54°14.20'N	132°55.00'W
POINT 4)	thence 329° true for 3.2 miles to	54°17.00'N	132°57.80'W
POINT 5)	thence 270° true West for 9.19 miles to	54°17.00'N	133°13.40'W
POINT 6)	thence 215° true to its intersection with	54°14.96'N	

Trollers are reminded that the latitudes and longitudes of the aforementioned points are the legal positions of the boundary and the bearings and ranges off points of land are only an "aid to navigation" and should be used with discretion.

3. Areas 6 to 10 will open, subject to net fishing times and areas only until 2359 hours July 31, 1996.

4. Areas 11 and 111 will remain closed for all salmon species for the 1996 season.

5.13. Lower Strait Of Georgia Conservation Measures

The following portions of Areas 10 and 11 will be closed to trolling for the season (see Figure 8):

1. Those shaded portions of sub-areas 10-1 and 10-2 lying south of a line due West from Bay Point to the Surfline.

2. The shaded portion of 11-2 lying easterly and shoreward of a line from the northwest corner of Subarea 11-2, to Pine Island, to Bright Island in the Buckle Group, then to the mainland following the Area 11 and 12 boundary.

5.14. Chinook Encounter Rate Monitoring Program

This fishing plan has been developed to allow fishing in those areas where chinook encounter rates will be minimized and to take advantage of the migratory timing of the stocks of concern. WCVI stocks will be encountered in open areas throughout the fishing season. A monitoring program will be implemented to ensure that conservation objectives are being met and that in-season adjustments can be made if required.

DFO will require the cooperation of trollers in providing information on the frequency of chinook encountered when fishing. In support of this program, logbooks will be issued randomly to the fleet and DFO requests that this information be recorded on a daily basis. All information received during this program will be strictly confidential between participants and the Department.

5.15. Barbless Hooks

The Northern Trollers Association has endorsed the utilization of barbless hooks for the 1996 season. DFO fully supports this initiative and requests the co-operation of all trollers to use barbless hooks. Further discussion on this and other initiatives will be undertaken both in-season and post-season with representatives of the North Coast Troll Management Committee.

6. ENFORCEMENT

OBSERVE, RECORD AND REPORT

FISHERIES VIOLATIONS	1-800-465-4336
WILDLIFE AND POLLUTION VIOLATIONS	1-800-663-9453

Users of the resource have a responsibility to report violators. Any suspected or actual violations can be quickly and discretely passed on to the appropriate Enforcement Officer by telephoning the toll-free Observe, Record and Report (ORR) Numbers for reporting fisheries or wildlife and pollution violations.

June 15, 1996 - March 31, 1997:	24 hour coverage

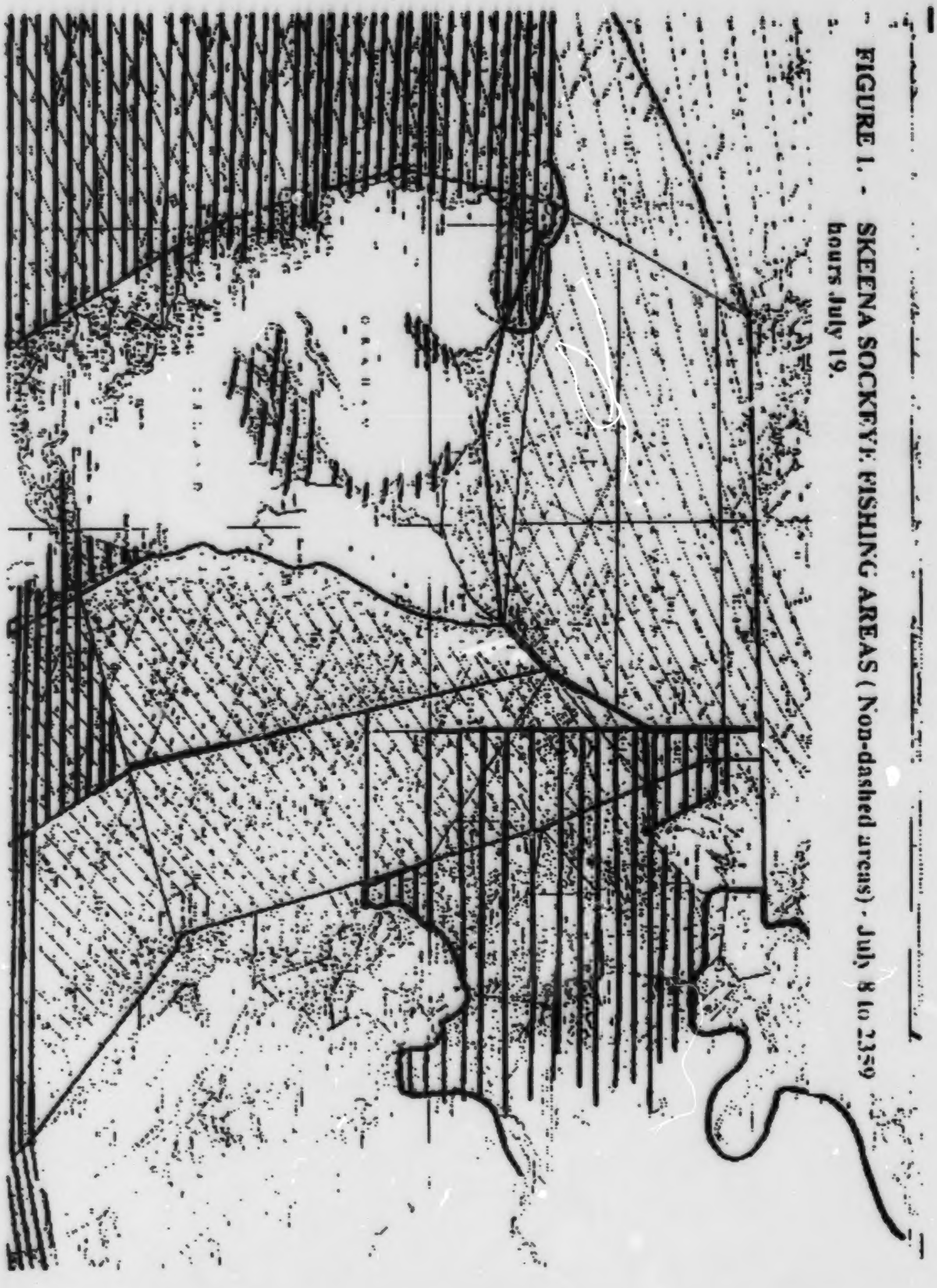
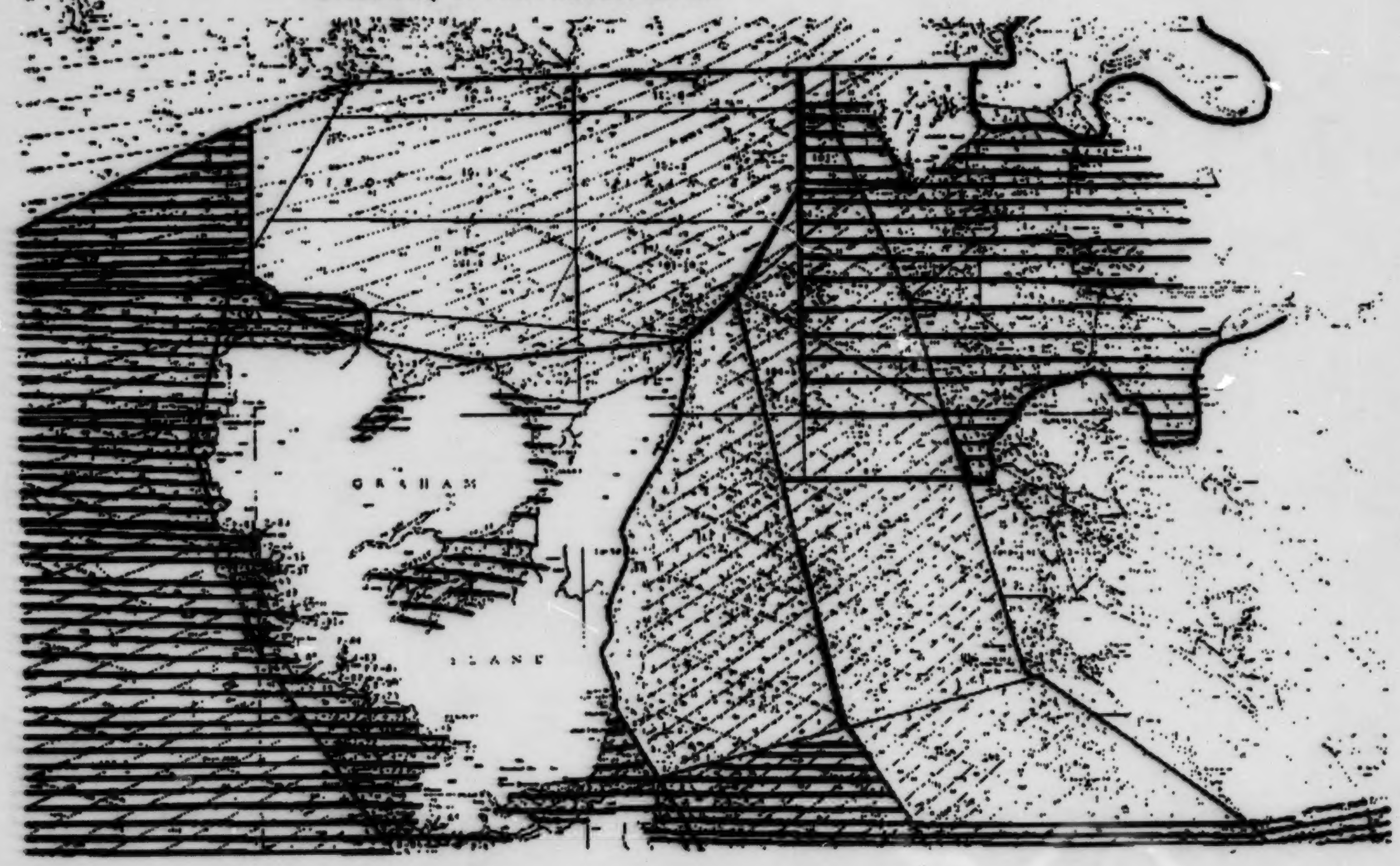


FIGURE 1. - SKEENA SOCKEYE FISHING AREAS (Non-dashed areas) - July 8 to 2359 hours July 19.

FIGURE 2. - SKEENA SOCKEYE FISHING AREAS (Non-dashed areas) - As of 0001 hours July 20 until further notice.



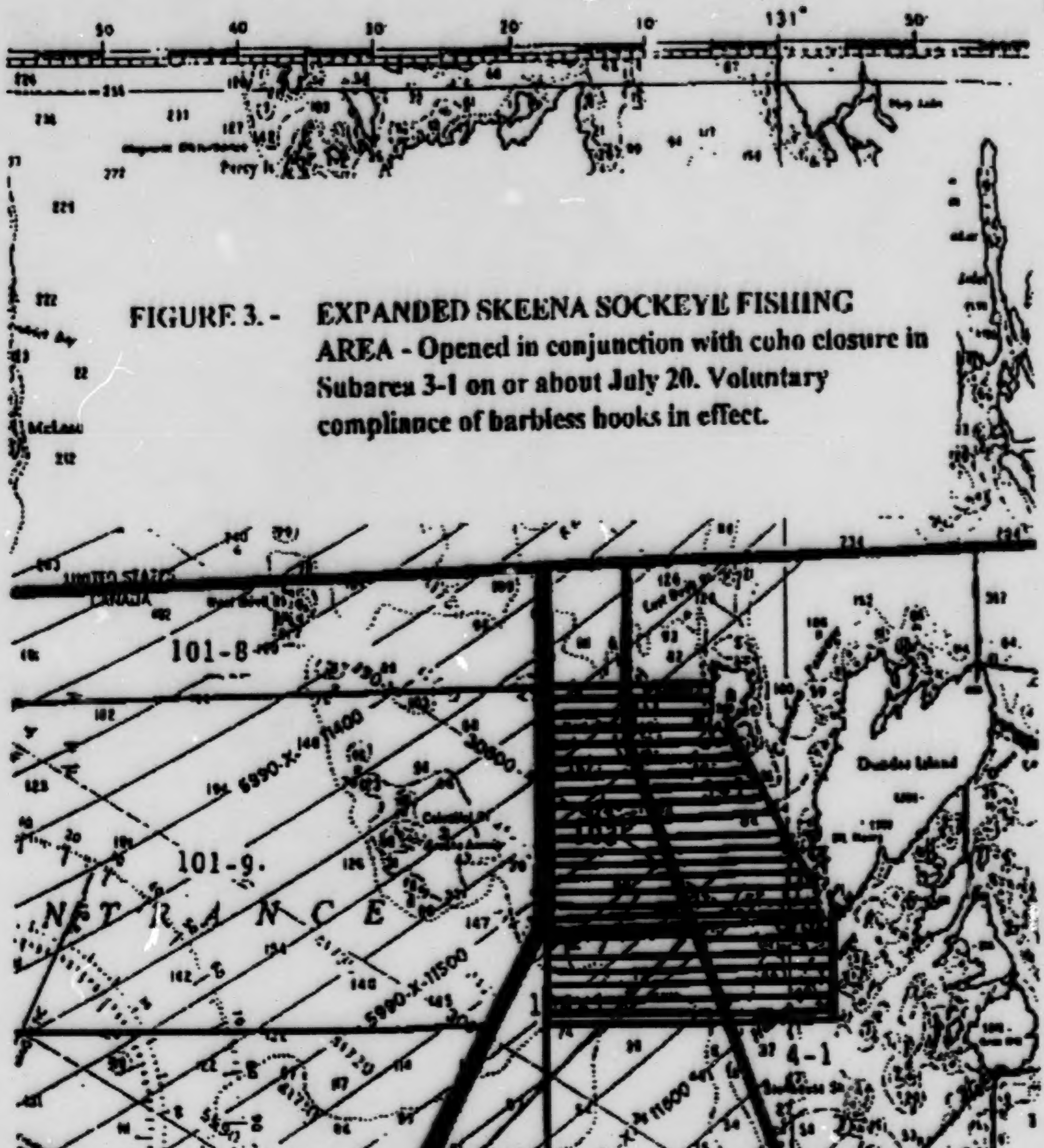


FIGURE 3. - **EXPANDED SKEENA SOCKEYE FISHING AREA** - Opened in conjunction with coho closure in Subarea 3-1 on or about July 20. Voluntary compliance of barbless hooks in effect.

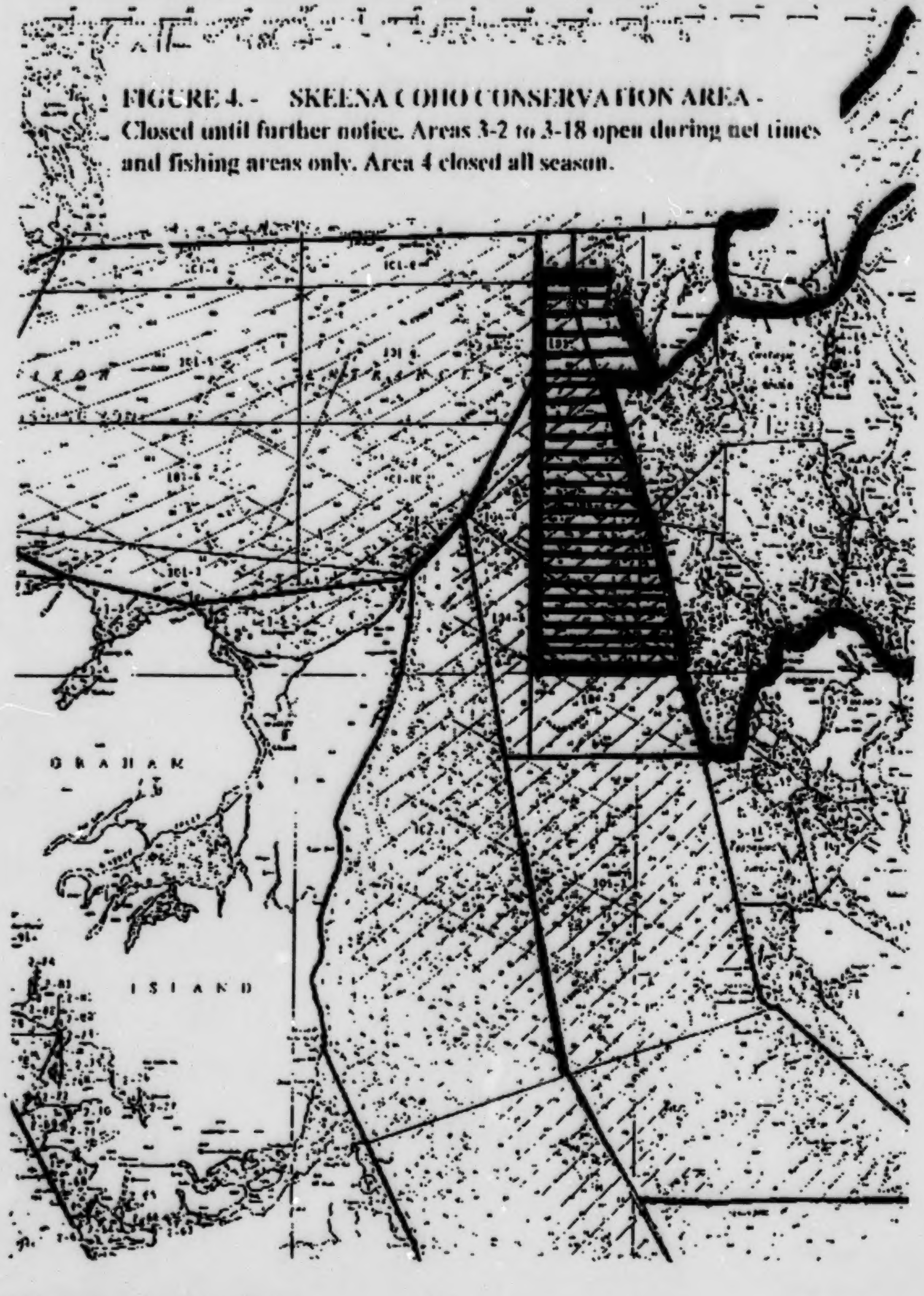
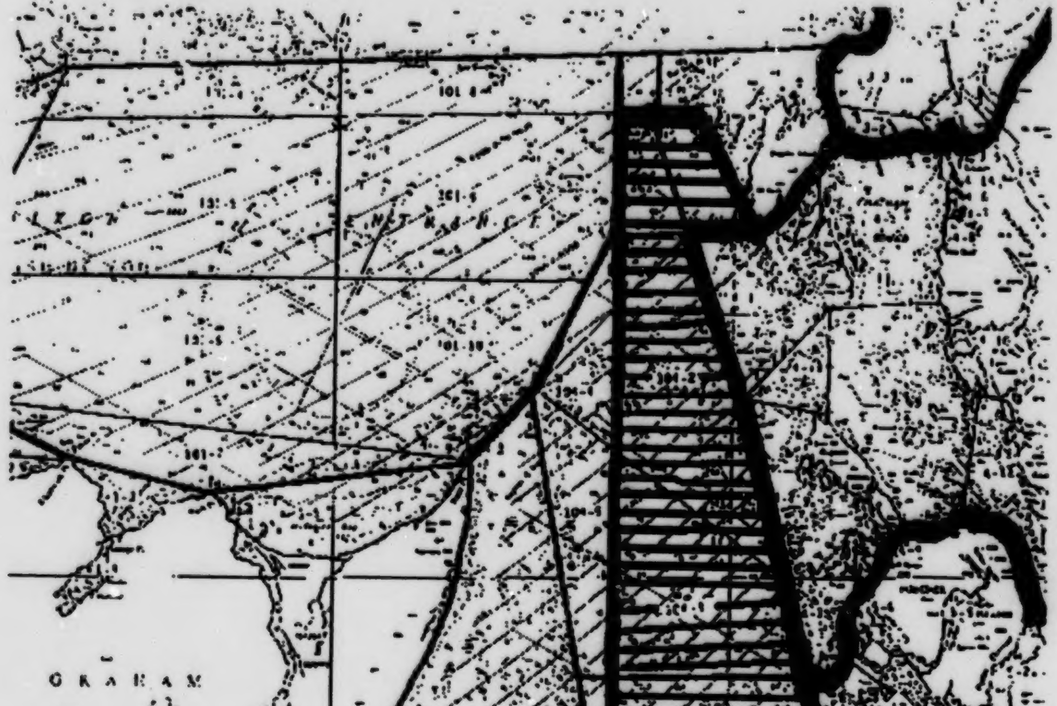


FIGURE 4. - SKEENA COHO CONSERVATION AREA - Closed until further notice. Areas 3-2 to 3-18 open during net times and fishing areas only. Area 4 closed all season.

FIGURE 5. - HECATE STRAIT CLOSURE - After August 25 to reduce Chinook shakers.



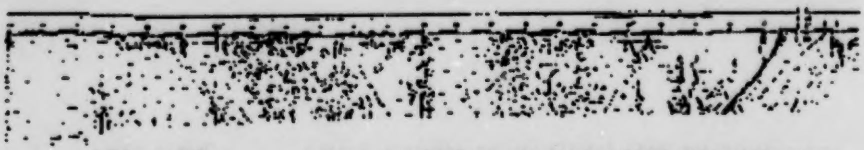


FIGURE 6. - AREA 1 CHINOOK REDLINE BOUNDARY AREA - Closed to trolling all season.

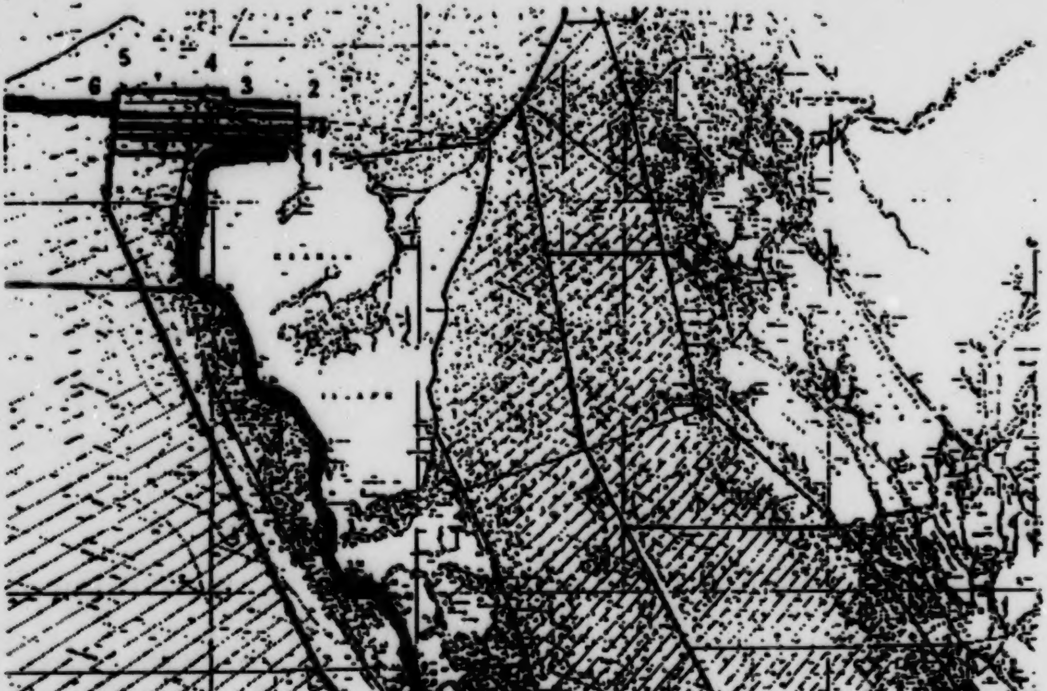


FIGURE 7. - AREA 2W CLOSURE FOR CONSERVATION OF WCVI CHINOOK - Closed until further notice.

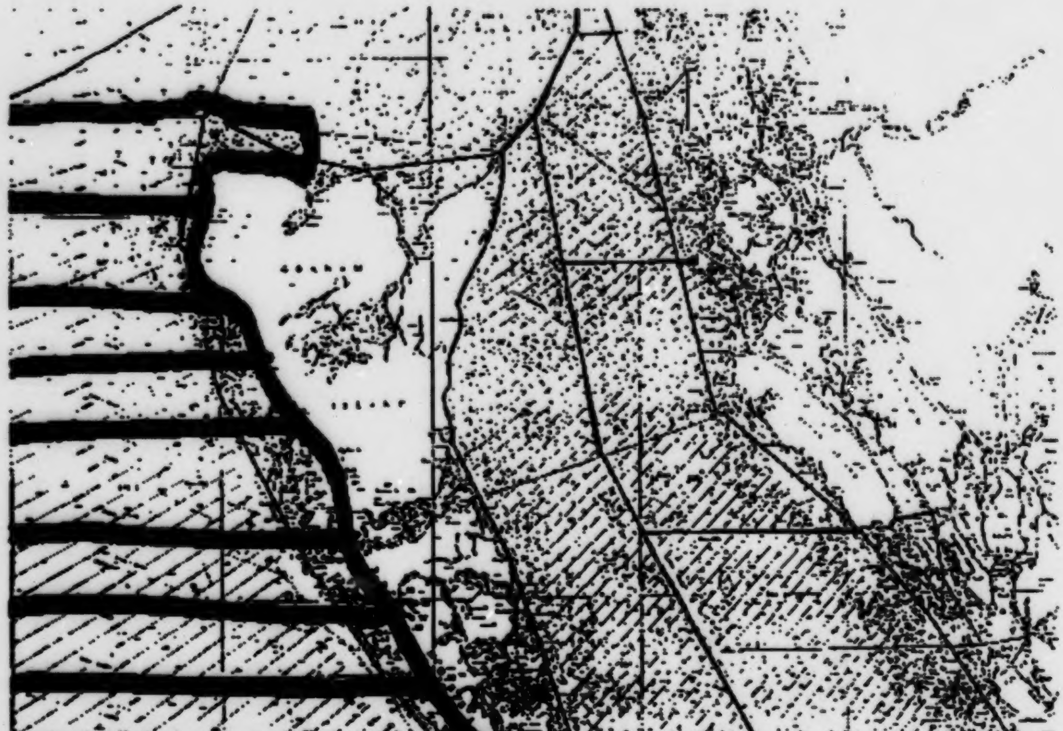
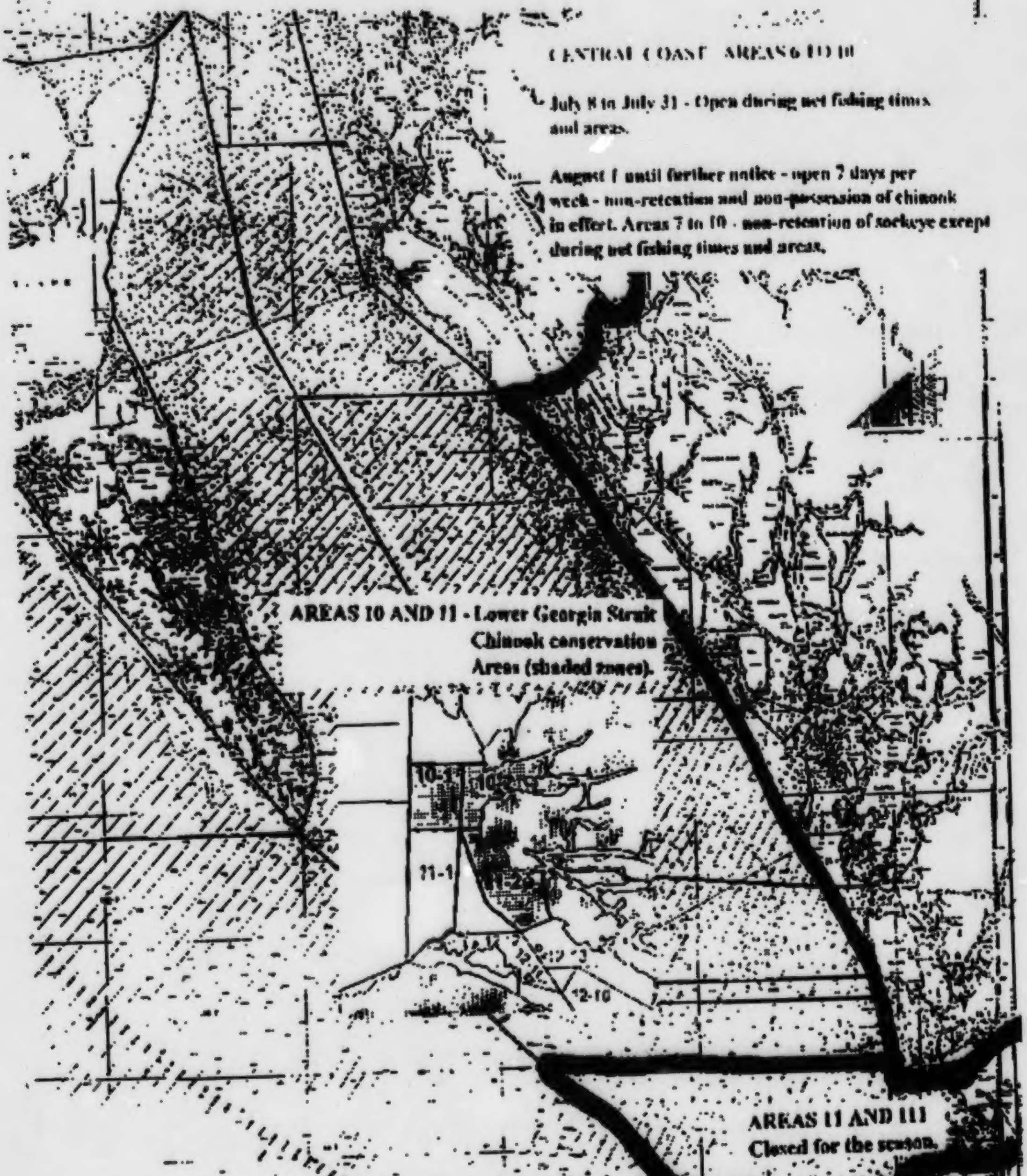


FIGURE 8. - AREAS 6 TO 11 - Closures for conservation of WCVI and lower Strait of Georgia chinook .



CENTRAL COAST AREAS 6 TO 10

July 8 to July 31 - Open during net fishing times and areas.

August 1 until further notice - open 7 days per week - non-retention and non-possession of chinook in effect. Areas 7 to 10 - non-retention of sockeye except during net fishing times and areas.

AREAS 10 AND 11 - Lower Georgia Strait Chinook conservation Areas (shaded zones).

AREAS 11 AND 111 Closed for the season.